

DIGITRAX'S NEW UT6D THROTTLE p.52



New Athearn caboose p.57

March 2021 • ModelRailroader.com

Model Railroader®

Model a sense of place

This scenic layout showcases
New England action p.36

**Pelle Søbørg's
guide to
great track** p.30



Ray and Mary Ann
Fontaine model the
Boston & Maine in
autumn. See page 36.

PLUS

Freelanced town scene atop a 9-foot shelf p.26

Building an iconic railroad town in HO p.42

Add an interesting, realistic flatcar load p.48

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Vol. 88 • Issue 3

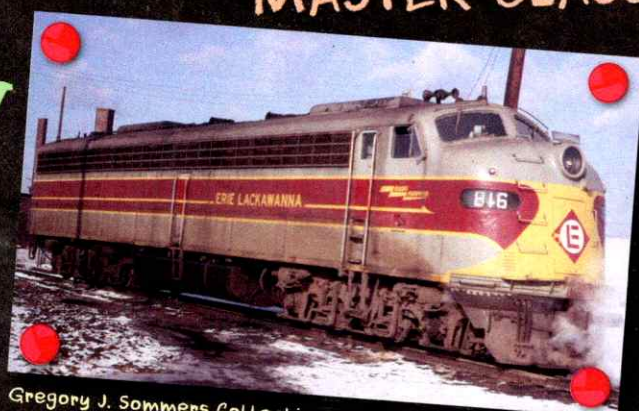
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Today's Lesson - THE EMD E8 Locomotive

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Step #1 - Find a popular, Locomotive, 3D scan it AND make the details CORRECT.

Step #2 - Put hours upon hours into perfecting the details



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NOTE: Initial 3D renders shown, subject to change.



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- Pennsylvania
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- VIA Rail

Pssst! Check out the back cover for a very special E8!

Step #5 (most important)

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LOK SOUND

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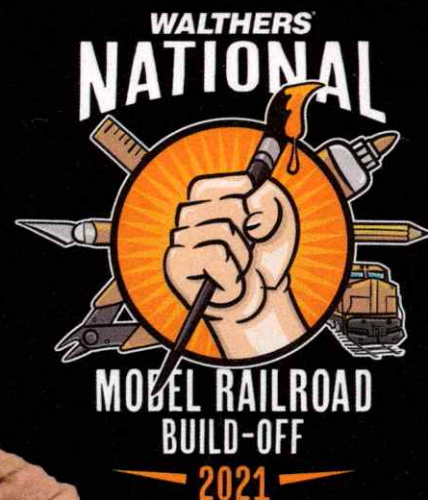


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John Ward of Mentor, OH submitted this impressive entry for the 2020 NMRBO contest.

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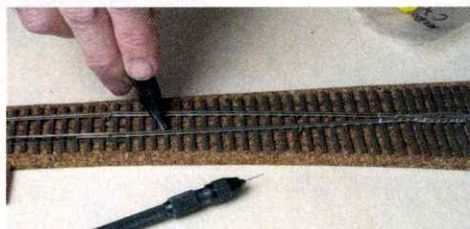
Go to www.walthers.com/nmrbo21 for details

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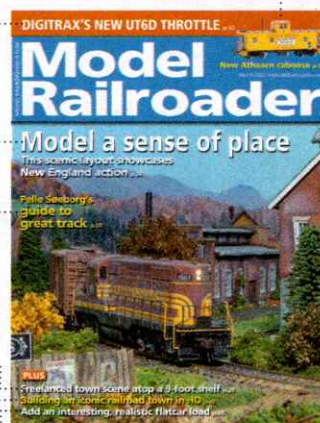
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On the cover: Ray and Mary Ann Fontaine both grew up in New England and worked together to model the region in HO scale. Lou Sassi photo



Next issue

In April, we take you to the basement of a train fanatic who models in 1:1 scale! Plus, visit a Western Maryland layout, make pole gates and conifers, and more!

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Model Railroader (USPS 529-810, ISSN 0026-7341) is published monthly by Kalmbach Media Co., 21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI 53187-1612. Periodicals postage paid at Waukesha, Wis., and additional offices. POSTMASTER: Please send address changes to *Model Railroader*, P.O. Box 8520, Big Sandy, TX 75755. Printed in USA. Canada Publication Mail Agreement # 40010760.

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For more than 25 years, our annual special issue *Model Railroad Planning* has helped modelers learn from the hobby's most respected builders.

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The layouts featured in *Model Railroad Planning* are often works in progress.



Richly detailed scenes like the one at left alternate with swathes of plywood, unballasted track, and landscapes devoid of scenery. It's a rare opportunity to see great model railroads taking shape.

Model Railroad Planning is available at hobby retailers or by visiting our website at KalmbachHobbyStore.com.



A pair of Alco RS-3s clatter across the diamonds on Bill Darnaby's HO scale Maumee Route. Craig Wilson photo

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HO scale



Siemens SC-44 Charger diesel-electric locomotive. This modern passenger engine is now available from Bachmann Trains. The HO scale SC-44 Charger is decorated in the passenger carrier's Midwest (two road numbers), Pacific Surfliner (one number), and Cascades (WSDOT, one number) schemes. The model (\$459) has a dual-mode TCS WOWSound

decoder with Audio Assist; a Keep-Alive capacitor; a die-cast metal frame; a printed destination board; directional headlights; interior corridor work lights; roof-mounted strobe lights; marker lights; and separate, factory-applied windshield wipers, grab irons, and detail parts. Bachmann Trains, 215-533-1600, bachmanntrains.com

HO scale locomotives



• **Electro-Motive Division GP38 diesel locomotive.** New road numbers: Norfolk Southern (Thoroughbred scheme, two numbers) and RJ Corman (red, silver, and white scheme). New paint schemes: Conrail (American Revolution Bicentennial scheme in one number, blue with white sill stripe in two numbers) and Bangor & Aroostook (dark blue and gray). Re-issues: Norfolk Southern ("First Responders" scheme, one number). Three numbers per scheme unless noted; both body styles available undecorated. Directional golden-white light-emitting-diode headlights, detailed cab interior with crew figures, and positionable drop steps. Direct-current model with eight-pin plug for Digital Command Control decoder, \$189.95; with dual-mode ESU LokSound Select

sound decoder, \$299.95. Master Line. Atlas Model Railroad Co., 908-687-0880, atlasrr.com

• **Chesapeake & Ohio class L-1 4-6-4 steam locomotive.** Original orange boiler (four road numbers), Baltimore & Ohio museum version (one number), and later yellow boiler (three numbers). Also available painted brass but

unlettered. Locomotive and tender feature brass body with die-cast metal chassis. Other features include dual-mode Paragon3 sound decoder with Rolling Thunder, factory-installed crew figures, traction tires, and synchronized smoke unit. \$749.99. Broadway Limited Imports, 386-673-8900, broadway-limited.com

N scale



American Car & Foundry 4,600-cubic-foot-capacity three-bay Center Flow covered hopper. New paint schemes on this Athearn car include Burlington Northern; BNSF Ry.; Chicago, Burlington & Quincy; Pennsylvania RR; and Union Pacific. The N scale car features etched-metal running boards; screw-mounted 100-ton trucks with 36" metal wheelsets; metal stirrup steps; separate, factory-applied outlet gates; and body-mounted McHenry scale couplers. Single cars are priced at \$29.98. Three-packs retail for \$84.98. Athearn Trains, 800-338-4639, athearn.com

MOBILE UPDATES

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H0 scale freight cars



• **Assorted freight cars.** Chicago & North Western American Car & Foundry 2,970-cubic-foot-capacity two-bay Center Flow covered hopper (single car, \$20.98; three-pack, \$61.98). Grand Trunk Western 40-foot double-sheathed refrigerator car, \$20.98. Lehigh Valley 40-foot double-door automobile boxcar, \$19.98. Louisville, Henderson & St. Louis United States Railroad Administration two-bay hopper, \$18.98. Seaboard System American Car & Foundry 4,600-cubic-foot-capacity three-bay Center Flow covered hopper, \$20.98. Injection-molded plastic kits with plastic wheelsets, Accumate couplers, and steel weight(s). Accurail, 630-365-1173, accurail.com



• **General American 8,000-gallon insulated 1917-design radial course tank car.** Anchor Petroleum Co., Tulsa, Okla. (1948+, six road numbers) and National Tank Car Co. (1922+ lease, three numbers). Also available ready to run painted black but unlettered and as undecorated kit. Separate, factory-applied tank handrail and tank strap detail; CNC-machined 33" metal wheels; and Kadee scale head couplers. \$44.95. Tangent Scale Models, 828-279-6106, tangentscalemodels.com

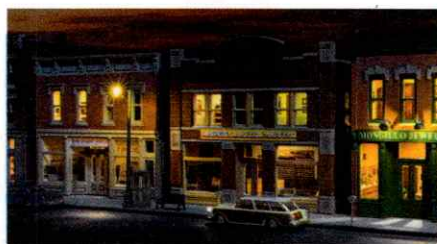
H0 scale passenger equipment



• **Bi-level commuter cars.** Trinity Rail Express (Dallas/Ft. Worth, series IV coach and cab-coach), Agence Métropolitaine de Transport (Montreal, series IV coach and cab-coach), GO Transit (early scheme, series I coach and cab-coach), Metrolink (Los Angeles, series III coach and series II cab-coach),

TriRail (Miami, series I coach and cab-coach), and West Coast Express (Vancouver, series IV coach and series II cab-coach). Undecorated coach (series I, III, and IV) and cab-coach (series I, II, and IV) also available. Body shell with or without rivet details, four or five windows on lower level as appropriate, inside-bearing trucks with roller-bearing axles and metal wheelsets, interior and underbody details, tinted window glazing, metal side grab irons, constant dual-mode interior lighting, and controllable dual-mode cab car lighting. Single coach, \$99.95; single cab-coach, \$119.95; three-car set without cab car, \$299.95; and three-car set with cab-coach, \$319.95. Delivery in 2021. Rapido Trains, 905-474-3314, rapidotrains.com

H0 scale structures



• **DPM/Roomettes Combos.** Ashby Auto Parts, \$42.99. Arlington Hotel, \$59.99. Atlas Taxi & Delivery, \$32.99. Banfield Street Flats, \$43.99. Banfield Street no. 1, \$32.99. Banfield Street no. 3, \$32.99. The Bookworm, \$34.99. Borgo Auto Loans, \$29.99. Bradley Fire Hall, \$32.99. Eastown Cycle, \$25.99. Millie's House, \$26.99. Mongillo Jewelers, \$32.99. Ohio Shipping, \$34.99. The Paint Pros, \$31.99. Signal Brewery, \$35.99. Sporto's Outdoor & Athletic, \$37.99. Stewart's Hobby Shop, \$31.99. Each set includes DPM building, Roomettes laser-cut interior kit, and light-emitting-diode interior lighting (compatible with Woodland Scenics Just Plug Lighting System, sold separately). Woodland Scenics, 573-346-5555, woodlandscenics.com

N scale locomotives



• **Southern Pacific class GS-4 4-8-4.** Postwar black with rear-mounted train number boards. Two road numbers. Drivers are operated by functional side rods. Electrical pickup from both driver and tender for constant electrical

Conducted by Cody Grivno

In Memoriam

Charles F. Ro, Sr., 1932-2020

Charles F. Ro Sr., of Saugus, Mass., passed away Dec. 1. He was 88 years old.

He founded Charles Ro Supply Co. in 1972 in Malden, Mass. The company is among the biggest Lionel Trains dealers in the world and is one of the largest retailers of electric trains in all scales in the United States. Ro was also the manufacturer of USA Trains.

Patrick J. Mucci, 1947- 2020

Patrick J. Mucci, of Macomb, Mich., died on Dec. 3. He was 73 years old.

Mucci operated numerous business throughout his life, including P&D Hobby Shop in Fraser, Mich., a store that championed O scale for 46 years.

connection, directional headlight and simulated Mars light, illuminated number boxes, detailed cab interior, and Kato knuckle coupler on front and rear. Direct-current model, \$240; pre-installed Digital Command Control (DCC) motor and light decoder, \$320; and pre-installed ESU LokSound DCC decoder, \$440. September-October 2021. Kato USA Inc., 847-781-9500, katousa.com

N scale freight cars



• **FMC 50-foot offset double-door boxcar.** Burlington Northern (Galveston Wharves, East St. Louis Junction RR Co., and Union RR of Oregon patch-outs), Arcata & Mad River (red with Simpson Timber Co. lettering), Sierra RR (cream and orange), Yreka Western (dark blue with goose herald), and Northern California shortlines three-pack (one each Arcata & Mad River, Sierra RR, and Yreka Western). Three road numbers per scheme. Injection-molded plastic with screw-mounted roller-bearing trucks, metal wheels, and McHenry couplers. Single car, \$26.98;

Club offerings



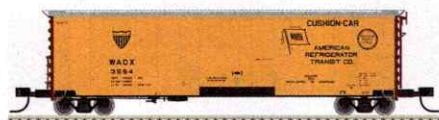
• **Great Northern 24 x 48-foot passenger and freight depot.** Laser-cut basswood and aircraft-grade three-ply birch plywood HO scale kit produced by Hidden River Manufacturing for the Great Northern Ry. Historical Society. Features interior and exterior walls, flooring, removable roof with soffit, three-tab shingle strips, two- or three-bay front windows, window and door plugs for modifying the depot, roof access ladder, peel-and-stick doors, basswood chimney, and trim. Measures 6 $\frac{9}{16}$ " x 3 $\frac{3}{4}$ " x 3". Platform not included. \$49.95. Great Northern Ry. Historical Society, gnrhs.myshopify.com

• **Great Northern 50,000-gallon wood water tank and pump house.** HO scale kit produced by Monroe Models for the Great Northern Ry. Historical Society. Laser-cut basswood kit with micro-plywood, cardstock, and fiber board parts. Tank roof is one-piece injection-molded styrene part with molded shingles and lead-free white-metal cap for top of the cone. Cast white-metal spout is scale 14 feet long and includes chain. Pump house (not shown) features laser-etched fiber board shingles and cast white-metal chimney. Tank is approximately 6 $\frac{1}{2}$ " tall with 3" x 3" base. Pump house measures 2 $\frac{1}{4}$ " x 2" x 2". \$87.95. Great Northern Ry. Historical Society, gnrhs.myshopify.com



Starbucks Coffee. Summit USA continues to add to its line of modern HO scale structures. The latest release is Starbucks Coffee, a milled styrene and laser-cut acrylic kit with self-adhesive micro-plywood, a drive-through menu, signs, and window glazing. The parking lot base, patio furniture, fence, and vehicles aren't included. Parts may need light sanding in joints for cosmetic reasons. Starbucks Coffee (\$89.95) measures 8" x 4 $\frac{3}{4}$ " x 3 $\frac{1}{4}$ ". Summit USA, 337-436-8481, summit-customcuts.com

three-pack, \$76.98. December 2021. AthearnN. Athearn Trains, 800-338-4639, athearn.com



• **General American 50-foot insulated boxcar.** New paint schemes: American Refrigerator Transit (yellow, brown, and black with Wabash and Missouri Pacific heralds), Erie Lackawanna (brown and white with diamond herald), New York Central (Century Green and black with "Cushion Underframe" lettering), Nickel Plate Road (brown, black, and white), Rock Island (brown and white), and St. Louis-San Francisco (Frisco, yellow with herald and "Ship it on the Frisco" slogan). Three road numbers per scheme. Injection-molded plastic with wire uncoupling levers and etched-metal running boards and crossover platforms. \$34.95. Third quarter 2021. Master Line. Atlas Model Railroad Co., 908-687-0880, atlasrr.com

O scale freight cars



• **40-foot rebuilt double-sheathed refrigerator cars.** New paint schemes:

Chicago, Burlington & Quincy (yellow and black); Fruit Growers Express (yellow and brown); and Roberts & Oake Packers (yellow and brown). New road numbers: Lackawanna Refrigerator Line (orange and black), Pacific Fruit Express (yellow and black with Southern Pacific Lines herald), and Western Refrigerator Line (yellow and brown). Two numbers per paint scheme; also available undecorated. Plastic body; die-cast metal underframe; separate, factory-applied ladders, grab irons, stirrup steps, door hinges, handles, and latches; positionable doors and hatches; and 40-ton solid-bearing trucks. \$94.95 (undecorated, \$89.95). Third quarter 2021. Master Line. Atlas O, 908-687-0880, atlasrr.com

Z scale locomotives



• **Alco RS-3 diesel locomotive.** Canadian National (green-and-yellow paint scheme). Three road numbers. Phase III body; corner-stacked number boards; Alco Association of American Railroads trucks; three-chime air horn; 1,400-gallon fuel tank; 7.5mm coreless motor with dual flywheels; traction tires, built-in pilot; directional light-emitting-diode headlights; and body-mounted couplers. American Z Line, 614-764-1703, americanzline.com

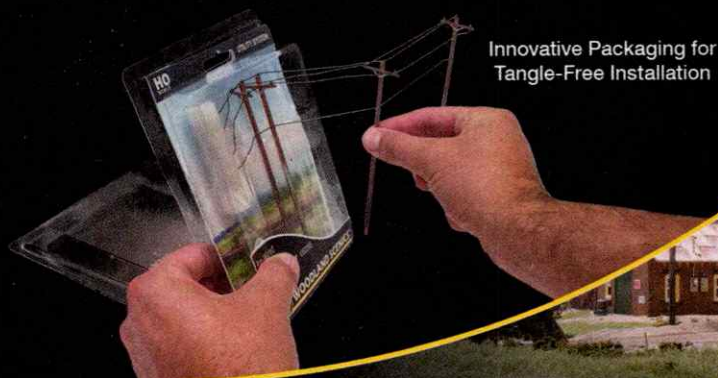


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Showcase

1



1 40-foot plug-door steel refrigerator car. Accurail offers this HO scale kit decorated for Milwaukee Road. The model (\$19.98) has plastic wheelsets and Accumate couplers. Accurail, accurail.com

2 North American Car Corp. 50-foot boxcar. Dakota, Minnesota & Eastern is among the six paint schemes on this Athearn model. The HO scale boxcar (\$34.98) is offered in three road numbers per scheme and has body-mounted



2



5

6

McHenry scale couplers. Athearn Trains, athearn.com
3 12-piece file set. This tool set, produced by Excel Blades, includes two each square, round, half-round, triangle, equaling, knife, and flat files in a storage pouch. The set sells for \$21.99. Kalmbach Hobby Store, KalmbachHobbyStore.com
4 53-foot high-cube intermodal containers. Canadian National (multi-modal) is one of 10 schemes offered on this HO scale model. The container



4

(two-pack, \$29.95) has a removable floor and optional heater box and fuel tank decorated and installed as appropriate. Rapido Trains Inc., rapidotrains.com
5 Electro-Motive Division GP39-2 diesel locomotive. This N scale four-axle road locomotive is painted for Atchison, Topeka & Santa Fe; BNSF Ry.; Burlington Northern; Soo Line; Twin Cities & Western; and Union Pacific in two road numbers per scheme. Direct-current models with a speaker retail

3



for \$139.95. Models with an ESU LokSound Digital Command Control and sound decoder sell for \$249.95. Atlas Model Railroad Co., atlasrr.com
6 Stainless steel probes. This four-piece set (\$12.99) is produced by Squadron Tools. The probes have needle sharp points and are ideal for positioning, adjusting, and manipulating parts in hard-to-reach places. Kalmbach Hobby Store, KalmbachHobbyStore.com

MR

Union Pacific Railroad (UP) class 4000

The Union Pacific Railroad rolled out the biggest restoration of 2019, the complete overhaul of the largest steam locomotive in the world – the Big Boy, road number 4014.

TRIX



To commemorate this event, Trix has reissued an accurately redesigned model in HO scale (Item No. 22163). This model was made specifically for the HO US market.

- RP 25 Wheels
- Kadee® Couplers

This metal model has a total of 14 design changes to accurately represent the prototype, including changing to an oil firing tender, "Big Boy" written on the smoke box door, applying the UP 4014 logo onto cab floor and more!

Also available in a Märklin H0 version (37997) and standard Trix HO version (22014).

Trix products are available from authorized Trix and Märklin dealers. See our complete line of products at marklin.com and trix.de/en. Contact customerservice@marklin.com for more information or to request a free New Items catalog.

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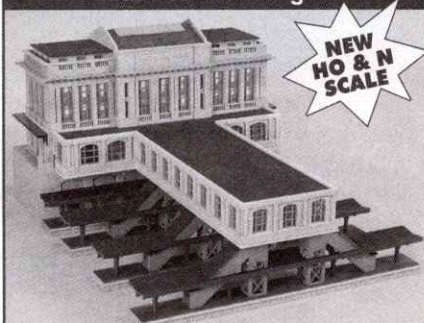
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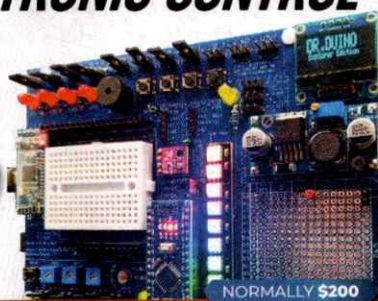
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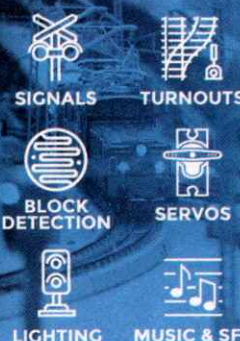
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Electro-Motive Diesel SD70ACeP4 demonstrator units no. 1211 and 1212 lead a train during a test run on BNSF Ry.'s Raton Subdivision, west of Trinidad, Colo., in October 2013. After touring the rails of prospective buyers, demonstrators like this are sold off and repainted in their new owners' liveries. Daren Genau photo

What's a "demonstrator" locomotive?

Q I'm doing research on the Wisconsin Central, Wisconsin & Southern, and the Soo Line. Some photos I've found refer to the locomotives as "demonstrators." What exactly is a demonstrator locomotive?

Bob Vysinka, LaValle, Wis.

A When a locomotive manufacturer like Electro-Motive Diesel or General Electric comes out with a new model, it will build a few "demonstrator" models. It will then send these locomotives to railroads for them to try out, in hopes the railroad's managers will see the advantages of the new model and order some for their roster. Since the demonstrator locomotives don't belong to the railroads, they're painted in promotional schemes featuring the manufacturer's name and logo instead of the railroad's. The demonstrators usually make their tour of several railroads before being sold and repainted in the new owner's livery.

Q My son joined the Army in February, and due to COVID-19, we haven't been able to see him. Hopefully, he will be home soon. I'd like to surprise him by installing lights in all his cabooses. He uses DCC, and I'd like to know the best way to light them. All his cabooses have metal wheels. Thanks for any help you can provide.

Ron Bamford, city not given

A That sounds like a thoughtful gift. Your first step will be getting power from the wheels into the caboose by installing wheel wipers. Check out the article "Power pickups for rolling stock" in our January 2020 issue.

Second, you'll want to get some DCC function decoders (also called lighting-decoders) to install in each caboose.

Since the only thing they do is lighting, not motor control or sound effects, they're cheap. Any brand should do.

Next, install a warm white LED for the interior lighting, with a resistor to protect it (for a typical LED I'd recommend a 1,000Ω, but if the light proves too dim, switch to a smaller one). Then hook up the decoder's power leads to the wheel wipers and a function output to the LED. For some guidance on how to do that, check out the "DCC Corner" column for April 2011 or November 2013. If you or your son don't have these magazines in your back-issue stash, you can read and print them (or any other article from our 86-year publication history) by subscribing to our online Archive at modelrailroader.com/archive. Good luck on your project.

Q What is the purpose of the rectangles at each end of most N scale track? Google has no info I could find.

Gene Keene, city not given

A Are they plastic and attached to the ties? They are meant to represent the last tie at the end of the track section. If rail joiners are to fit on the rail, the last tie can't be attached to the rail like the others are, so the last tie is represented by separate pieces on either side of the rail, attached to the adjacent tie. Modelers to whom realism is important cut these "rectangles" off and, once the track is joined and fixed to the roadbed, replace them with single ties slipped under the track from the side.

Q Cody Grivno says to thin paint when painting couplers. I'm using Model Master Railroad Tie Brown. What is his recommendation? 3:1 or 4:1?

Edward Pala, Sevierville, Tenn.

A Group Technical Editor Cody Grivno replies: "When I airbrush couplers, I use 1/4 ounce of paint thinned with 1/2 ounce 70 percent isopropyl alcohol. The ratio may vary slightly depending on the type of thinner used.

"The key thing to remember when airbrushing couplers is you don't want to gum up the working parts. To avoid this, you can either build up the paint in light layers or spray the paint so it's nearly dry when it hits the coupler. The latter can be achieved by holding the airbrush farther from the couplers (8" to 10") or using a higher air pressure (35-40 psi)."

Q I recently built a small switching layout and have a question about operation. Are locomotives permitted to have cars at both ends when making switching maneuvers?

Bob Davidson, Churchton, Md.

A Every railroad has its own operating rules. Although for the most part these rules are uniform from railroad to railroad, an individual railroad might have a rule governing such maneuvers. If your prototype doesn't, the prevailing rule is always Rule 108: "In case of doubt or uncertainty, the safe course must be taken." And while most railroads have rules governing things like efficient use

Send questions and tips to associate editor Steven Otte at AskMR@MRmag.com.

of equipment and employees' time that might seem to encourage cutting corners, safety is of such concern that a General Notice to that effect usually precedes the General Rules in the employee handbook: "Safety is of the first importance in the discharge of duty."

So if the railroad doesn't have a rule about switching with cars on both sides of the engine – and that's such a specific case that I'd be surprised if any did – the question is whether doing so is the safest way to do things. If it would be unsafe to park cars on the main while switching industries, then the engineer must bring them along. If doing so would obstruct the engineer's view, then he must find somewhere else to park them.

Basically, the engineer is called upon to use his common sense, but if there's ever a question, he must come down on the side of safety. And usually, that means parking cars on the main and switching the facing- and trailing-point spurs in separate maneuvers, rather than dragging along extra cars on the other side of the engine.

Q I have a Union Pacific FEF 4-8-4 steam locomotive. It has a red light above the headlight. Can you tell me how it should be used? What's the rule for the front red light?

Jean Guy Villeneuve, Montreal

A That red light on your locomotive is a Mars light, so named for its manufacturer, the Mars Signal Light Co. On the Union Pacific these oscillating red lights were used as emergency stop signals. They weren't turned on in normal operation. On models, the oscillation is usually simulated by flashing or blinking the light-emitting diode.

Q I model in HO scale. Can you give me an idea how to blend in Atlas Snap-Switch machines with scenery while still allowing for full function?

Robert Paluch, Winnipeg, Man.

A Though Atlas Snap-Switch machines are intended to vaguely resemble prototype switch machines, they're several times larger, making their appearance a

little incongruous no matter what you do with them. We've seen people hide them in scenery; in one tutorial I saw online, the modeler turned his switch machine upside-down and backwards (so the throw bar still moved in the right direction), covered it with double-sided tape, then buried it in ballast. This technique still left a telltale hump by the side of the track, and obviously only works with the remotely triggered type of switch machine. If yours are manual only, this won't work.

As an alternative, Atlas also makes under-table remote switch machines. Other manufacturers, such as Caboose Industries, make more realistic looking manual ground throws and switch stands intended to be mounted track-side. Some modelers use choke cables (wire actuators in flexible plastic tubes) to line turnouts using fascia-mounted pull knobs. And there are other under-table options, including Tortoise by Circuitron, Blue Point, and Walther's Layout Control System. Any of these options would work with your switches.



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Q I've been a lifelong MR subscriber since 1970 and still have all of my back issues. Which issues contained the articles on the rebuilding of the Wisconsin & Southern branch? In particular, those related to the REC Paper mill?

Gene Keene, city not given

A The Wisconsin & Southern (WSOR) was our project railroad for 2008. Structures, including the paper mill, were in April's issue. Others who might be interested in reading about the WSOR but don't have these issues in their stash can read and print those articles, as well as any other we've published in the past 86 years, by subscribing to our All-Access Archive at modelrailroader.com/archive.

You might also be interested to hear that we recently published a special issue all about our MR&T house layout, *45 Years on the Milwaukee, Racine & Troy*, which includes a brief article on the WSOR project. You can order it at kalmbachhobbystore.com/product/special-issue/vt-mr13201101-c. **MR**

READER TIP

More help for Great Domes

In further response to Jeff Gottlieb's question about his Walther's Great Dome cars derailing (December 2020), there may be another answer.

On curves, the tops of the trucks sometimes snag on the car body shell or on the metal tabs that are part of the car's lighting system.

The solution is to grind down the high spots on the trucks. On the Pullman-Standard domes (used on the Milwaukee Road, Canadian National, and VIA Rail), the problem is caused by the plastic detail part added to the outside of the sideframe. Smoothing this part down with a file will solve the problem.

The Great Northern dome has different trucks, and the highest points on the truck are the four bolster pads, shown in the photo above. Filing a small amount off of these four pads should solve the problem.

I discovered this problem and the solution after finding my Great Domes derailed on good track with broad curves, despite everything being in gauge.
— John Day, Vancouver, B.C.



If your passenger car trucks are snagging on the underframe, try filing down the high points. John Day photo

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HO Dimensions:
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63 feet tall in S scale

85 feet tall in HO scale

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Electronic sign with waving flag animation

Dimensions:
9-11/16"W x 5-7/16"D x 11-3/4"H



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Backlit sign with 26 interchangeable decals included



HO Dimensions:
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The mooring basins for the Port of Milwaukee General Cargo no. 2 (foreground) and Continental Grain have been added to our Jones Island layout. Following along to learn how we added the harbor walls and water material. Bill Zuback photo

Adding water scenes to Jones Island

Up until now, the mooring basins on the Jones Island section of our HO scale Milwaukee, Racine & Troy layout were looking a little dry. Lake boats and ocean-going vessels would be hard pressed to dock in the plywood in front of the Continental Grain (now COFCO International) elevator or the Port of Milwaukee General Cargo Terminal no. 2.

Water features, in part, dictated the removable benchwork design for Jones Island [see the September 2020 *Model Railroader* for more on that. – Ed.] The

mooring basin for COFCO International is located in a corner adjacent to the hallway windows. If we built the layout with fixed benchwork, it would have required a reach of between 2'-11" and 3'-7½" to work on the mooring basin. Neither ideal nor comfortable.

Further, we needed to deal with the existing fascia. Instead of being attached to the benchwork, it was screwed to the window frames. The only way to get at it was removing the layout.

By making the end 60" of the layout removable, we could work on all four

sides in the workshop across the hall. This made painting the mooring basins, adding the harbor walls, installing the styrene dams, and pouring the resin water material much easier.

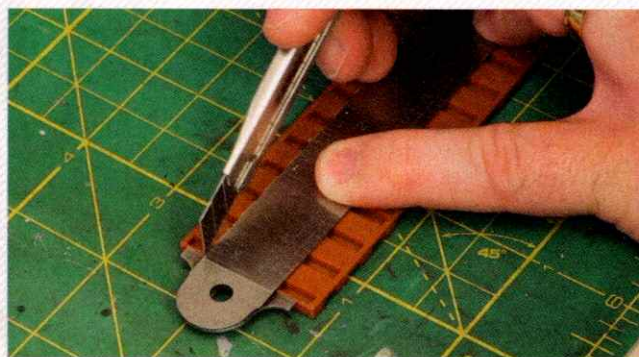
With the basins poured, we can reinstall the end section of benchwork and shift our focus to scenery and structures, bringing us ever closer to our goal of running trains on the island.

Don't forget, you can follow our progress on Jones Island between issues online. Head over to Trains.com to see all the action.

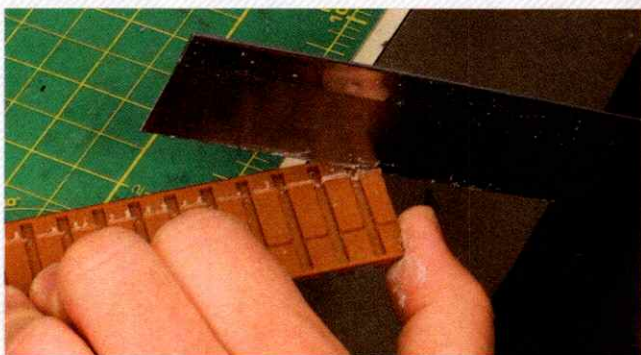
STEP 1 HARBOR WALLS



I used Walthers harbor wall kits (no. 949-4150) for the mooring basins. The kit includes the harbor walls, concrete walkways, and a sprue of detail parts. The harbor walls can be used as-is, cut along the molded line on back, or, in our case, cut to fit. I marked the cut lines with a pencil.



I took the marked (and labeled so I knew which order to install them) harbor wall sections to my workbench. Using a metal T-square as a guide, I first made several light passes along the pencil line with a snap knife. Work carefully so the blade doesn't wander off course.



Once I'd established a cut line with the knife, I finished cutting through the plastic with a 46-teeth-per-inch razor saw. The harbor walls were too long to fit in a miter box, so I set the plastic parts on the edge of my workbench and made the cuts. This isn't necessarily ideal, but it worked in this situation.



I cleaned up rough spots with a scuff pad and washed the parts in warm water with dish soap added to remove any impurities. Then I spray painted the harbor walls with Rust-Oleum Painter's Touch 2X Ultra Cover Red Primer (no. 249086). The off-the-shelf paint is plastic-compatible and won't craze the walls.

STEP 2 PAINTING THE BASINS



I started by painting the mooring basins with Rust-Oleum Painter's Touch Ultra Cover Flat Black using a 1"-wide brush. I probably applied more paint than needed, but I wasn't sure how much of the basin the walls would cover.



Another area I painted was the edge of the $\frac{3}{4}$ " plywood. Why did I invest the time painting this area? If the fascia didn't seat tight against the layout, I didn't want bare plywood visible right below the resin water material.

STEP 3 INSTALLING HARBOR WALLS



After the black paint was dry to the touch, I was ready to add the harbor walls. First, I ran two beads of DAP Alex Plus clear all-purpose caulk along the edge of the $\frac{3}{4}$ " plywood subroadbed.



There was a gap between the subroadbed and mooring basin. To prevent the resin from wicking under the harbor walls and onto the floor, I ran an extra thick bead of caulk along the floor of the mooring basin.



I placed the harbor walls into the scene with the bottom sticking out slightly. Then I pressed them into the caulk, sealing any gaps at the bottom of the wall sections. I'm happy to report there were no leaks.



I was debating how to best hold the harbor walls in place while the caulk dried. Then I remembered we had steel weights in our photo studio that were about the same height as the walls.

STEP 4 STYRENE DAMS



Once I had the harbor walls installed, I shifted my attention to the styrene dams. First, I ran a thick bead of the same clear caulk I used earlier along the edge of the $\frac{3}{4}$ " plywood mooring basin.



Next, I pressed the .060" styrene sheet, which I'd earlier cut into strips, into the caulk. I aligned the bottom of the styrene strips with the bottom of the plywood basin. Try to keep the styrene at a right angle to the basin.



I needed multiple pieces of styrene to form the dam. Since joints are a potential spot for the water material to escape, I ran a bead of caulk along the edge of the styrene and pressed the pieces together.



Steel weights weren't going to work to hold the styrene in place here. Instead, I turned to .188"-wide painter's tape. I placed the strips so half of the tape covered the styrene and the other half was on the wood benchwork.

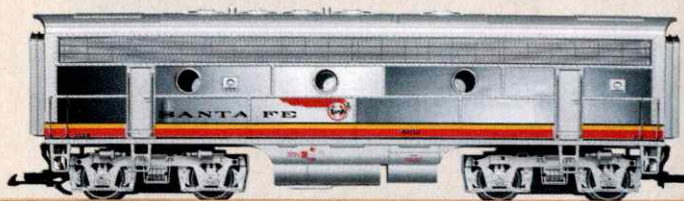


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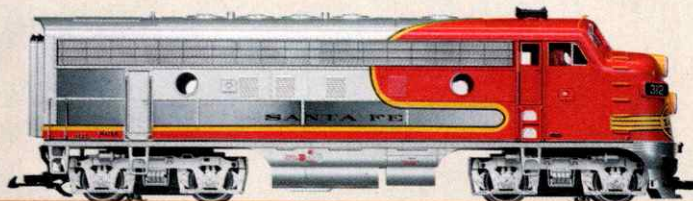
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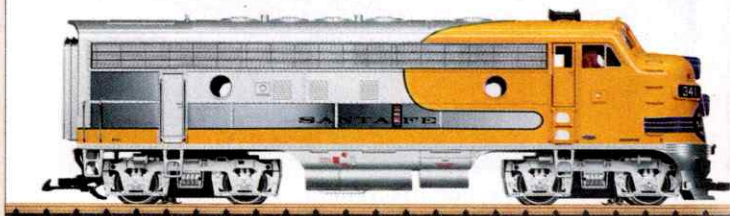


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STEP 4 STYRENE DAMS (CONT'D)



I used the same techniques to seal the end of the mooring basin. I paid extra attention to the corner where the two pieces of styrene met. Then I ran a bead of clear caulk in the corner and pressed it in with a craft stick. I taped the outside edge of the styrene as a precaution.



At the opposite end, there was a small gap between the styrene and the harbor wall. I filled in the gap with a piece of 1/4"-wide styrene strip. I came back later and painted the styrene Mineral Red, which is a reasonable match for the primer. I sealed the styrene from both sides with clear caulk.



To ensure there were no gaps between the plywood mooring basin and the styrene, I used a wood craft stick to press the caulk tight into the joint. There's an extra benefit to doing this, too. When you remove the dam, you'll be left with a nice, clean edge.

STEP 5 ADDING WATER

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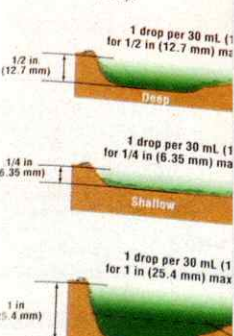
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Total Needed	Water Base	Activator
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360	240	120
330	220	110
300	200	100
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210	140	70
180	120	60
150	100	50
120	80	40
90	60	30
45	30	15

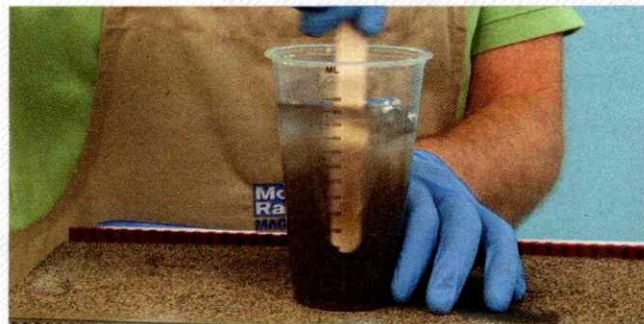
WATER TINT INFORMATION

The level of transparency of the water. Pour Water. See the illustrations below.
NOTE: To achieve the look of opacity in varying depths, the best formula is 1 drop per 30 mL (1 in (25.4 mm) max).



I let the caulk dry for two days, then turned the project over to David Popp. He used Woodland Scenics Murky Deep Pour Water in the basins. This is a two-part system consisting of a base and an activator. The package includes a booklet for determining how much material to use. The two basins needed 330 ml of material.

The activator can be added in one of two ways. It can be measured in a separate cup and poured into the base, or you can pour it directly into the base. David did the latter. The Murky Deep Pour Water kit includes clear, self-adhesive labels with graduation marks to make sure you use the right amount of base and activator.



After David added the activator to the base, he started mixing the resin with a wood stick. Wear an apron, gloves, and eye protection when working with resin, and make sure the work area is well ventilated.



About half way through the 5-minute mixing process, we tinted the material with black paint and Woodland Scenics Olive Drab Water Tint. Our goal was to get a greenish-black color similar to what we saw in photos.

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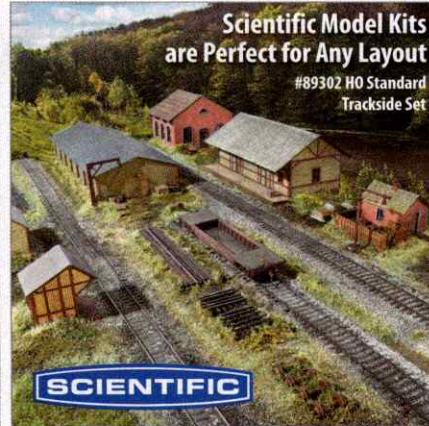


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STEP 5 ADDING WATER (CONT'D)



Then, using his mixing stick as a guide, David began pouring the resin. He started in the middle of the mooring basin, as the material is self leveling. Don't pour the resin close to the harbor walls, as this may leave a high-water mark. Resin often creeps, where it tries to climb up the sides of things. By starting in the middle, the resin will hit the harbor walls as flat as possible.



Since our pour was thin (approximately $\frac{1}{8}$ "), David checked for spots that resin didn't creep into, especially along the base of the harbor walls. As shown above, he used a wood craft stick to coax the resin into corners and the recessed portions of the wall. Do this carefully, though, as it's easy to accidentally splash the resin onto the harbor walls.

STEP 6 REMOVING THE DAMS



David let the resin cure for 24 hours. After he peeled off the masking tape, he removed the styrene dam. The styrene should easily separate from the acrylic caulk. If it doesn't, use a utility knife to break the joint.



There were some rough spots where the resin crept up the caulk used to seal the styrene dams. David used a snap-blade utility knife to smooth out the rough edges. A block plane would also work.

STEP 7 ANOTHER TAKE ON HARBOR WALLS



David used $\frac{1}{2}$ " extruded-foam insulation board and $\frac{3}{16}$ " Cellfoam 88 (Midwest Products) to build out a section of the layout for the LafargeHolcim cement plant. He used PL300, a foam-safe adhesive, to glue the pieces together. Don't use solvent-based adhesives, as they may dissolve the foam.



Fortunately for us, the old two-part resin I used to pour the harbor several years ago bit into the plaster, and not the plywood. David was able to cut away the old resin with a utility knife and lift out the unwanted material. This left him a flat surface to attach the foam to. The surrounding water was left untouched.



I then attached the harbor walls directly to the new foam with clear caulk, using pushpins and t-pins to hold the parts in place while the adhesive dried. Though the wall sections sit on top of the resin, some strategically placed Woodland Scenics Water Effects wave material will hide the seams. **MR**

N-Scale

MARCH / APRIL 2021

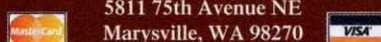


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PROTOTYPICAL LAYOUT, FREELANCED EXTENSION

A modeler whose work appeared in *Great Model Railroads* makes good use of some extra track, turnouts, and space

By Clark Propst • Photos by the author

My previous layout was based on one town. I replicated the railroad in that town as accurately as I could. Doing so required discipline, placing more constraint on myself than most modelers are comfortable with. When designing my current layout, the stub-ended Minneapolis & St. Louis (M&StL) Story City Branch [see *Model Railroad Planning 2018* and *Great*

Model Railroads 2019 – Ed.], I wanted a bit more freedom.

Most branch lines were built when steam was king. Provisions to turn the engine at the end of the line were mandatory. Although there was a turntable at the prototype Story City, it became troublesome, so a wye was built east of town and the turntable was retired. The steam engine turned on the wye and backed into town. I was modeling the diesel era,

when the wye existed, so I didn't build the turntable. But since diesels don't have to be turned, I didn't build the space-eating wye, either. I just turned the diesels by hand.

Then a friend, Barry, gave me a nice running Bachmann 2-6-0. I have photos of similar engines running on the branch. I thought, "I'll just turn it by hand, too." Then I picked up a Ten-Wheeler similar to the other type of



① Once the crew spots the last car they brought to town at the oil dealer, they can tie onto the outgoing train and head home. Clark Propst's Karlberg shelf layout is a 9-foot-long addition to his Minneapolis & St. Louis (M&StL) Story City Branch, which was featured in *Great Model Railroads 2019*.

steam engine used on the branch. Now I had two engines I would have to hand-turn at the end of their runs. You can't handle a steam engine and tender as easily as a diesel. I had to do something.

Story City was built atop storage cabinets along the long wall of the basement. In time, my wife, Eileen, asked me to extend the cabinets along the rest of the wall. So I added another 9 feet of cabinets, the top of which soon became a catch-all shelf. With turning the steam locomotives becoming a problem, I decided to put a view block up at the end of Story City and extend the line through the view block to a turntable on the shelf. One thing led to another, and before long, I was building a slide-in section 9 feet long to occupy the shelf.



② After a spin on the turntable, no. 943 runs around the train to tie onto the back and spot cars at the elevator. Prairie no. 943 is a NorthWest Short Line brass import rebuilt and painted by Peter Hall.

Settling on a design

Over the past few years I've had a growing interest in modeling, or at least considering, a generic granger line. What constitutes a generic granger line? It's characterized by an assortment of rail-served customers found in rural communities in the Upper Midwest through the middle of the last century. The core is the grain elevator. Peripherals include lumberyards, coal dealers, fuel distributors, stock pens, and seed and feed dealers. In later years, these were joined by concrete bulk plants and fertilizer dealers. Not to say there wasn't large industry out on the prairie; it's just not usually going to be found in a town of a few hundred people.

This new space would give me a chance to scratch that granger-town itch, as well as using up my remaining Micro Engineering code 55 flextrack and three custom-built Fast Tracks turnouts. With just three turnouts, I thought I would have to match the track arrangement at Story City, only on the other side of the view block. I didn't want to do that, so I asked for advice.

My retired railroad buddy Bob Drenth told me he knew of two locations where the prototype placed the turntable at the end of the main track and used it not only to turn engines, but also to align them to an escape track so they could run around their train. I knew that's what I wanted to do.

My stepson, Jason Klocke, suggested having a foreign road cross over my line with an interchange track sweeping uphill to connect to the crossing railroad. I took that advice, too. The elevated

crossing line would be the against the view block with a trestle over my track to disguise where the track comes through the view block.

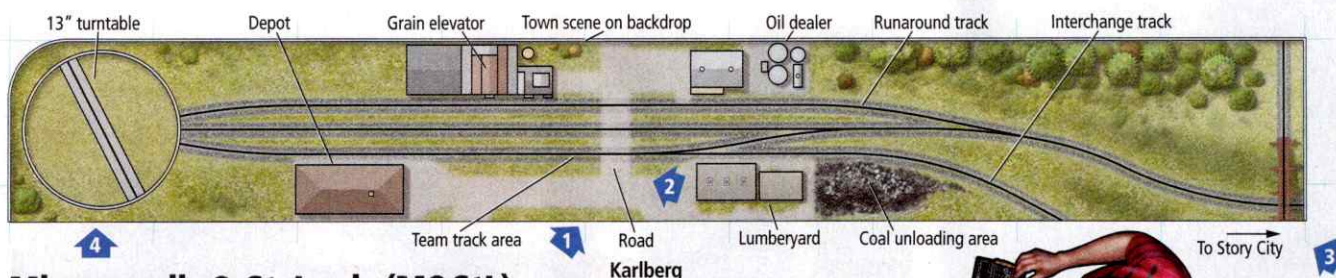
With both ends of the section decided upon, I just needed to fill in the middle. I used one of the three turnouts to branch off an industry spur on the back side of the main and another for the runaround track on the front. All three tracks would meet at the turntable. The last turnout would lead from the run-around track to the interchange track.

Tabletop construction

All the layout sections for the Story City Branch were built on a large table that was intended for family gatherings. Good thing Eileen puts a tablecloth over it during holidays! This extra section was no exception. All the sections were completed on the table before being slid into place on the benchwork. The downside to doing this is the track can't be tested until the whole section is in place and connected to the others. I feel fortunate that there were no serious issues.

All my town sections have a frame of 1 x 2 lumber with a kerf cut in 1/2" down into which a tempered hardboard sub-base fits, something like a picture frame. I then glued 1/2" Homasote to the sub-base inside the frame. At one end I cut a hole for a Walther's 90-foot turntable I received from a late friend's estate. After the track was laid, I stacked 1 1/2" foam board scraps to form the hill for the overhead foreign road at the entrance to the section.

It should be noted I started this project right after Thanksgiving 2018. At



Minneapolis & St. Louis (M&StL) Story City Branch

HO scale (1:87.1)
Size: 0'-15" x 9'-0"
Scale of plan: $\frac{3}{4}$ " = 1'-0", 12" grid
Numbered arrows indicate photo locations
Illustration by Kellie Jaeger
Find more plans online in the
ModelRailroader.com Track Plan Database.

some point in 2019, I volunteered to present a clinic on building this town at the Chicagoland Railroad Prototype Modelers meet in late October. Working sporadically, I had gotten this far by the end of April, and then the project halted because of fishing season. I didn't start working on it again till the end of August. This left me less than two months to finish the section and put together the clinic. The heat was on.

A question lingered: What should I name this new town? Because I'm not modeling a wye, Joe Atkinson suggested calling it Karlberg, after a mutual model railroading friend who's obsessed with wyes. I used the name as a file header for my construction and how-to photos for the clinic, and eventually the name struck. Karlberg it is.

Interchangeable industries

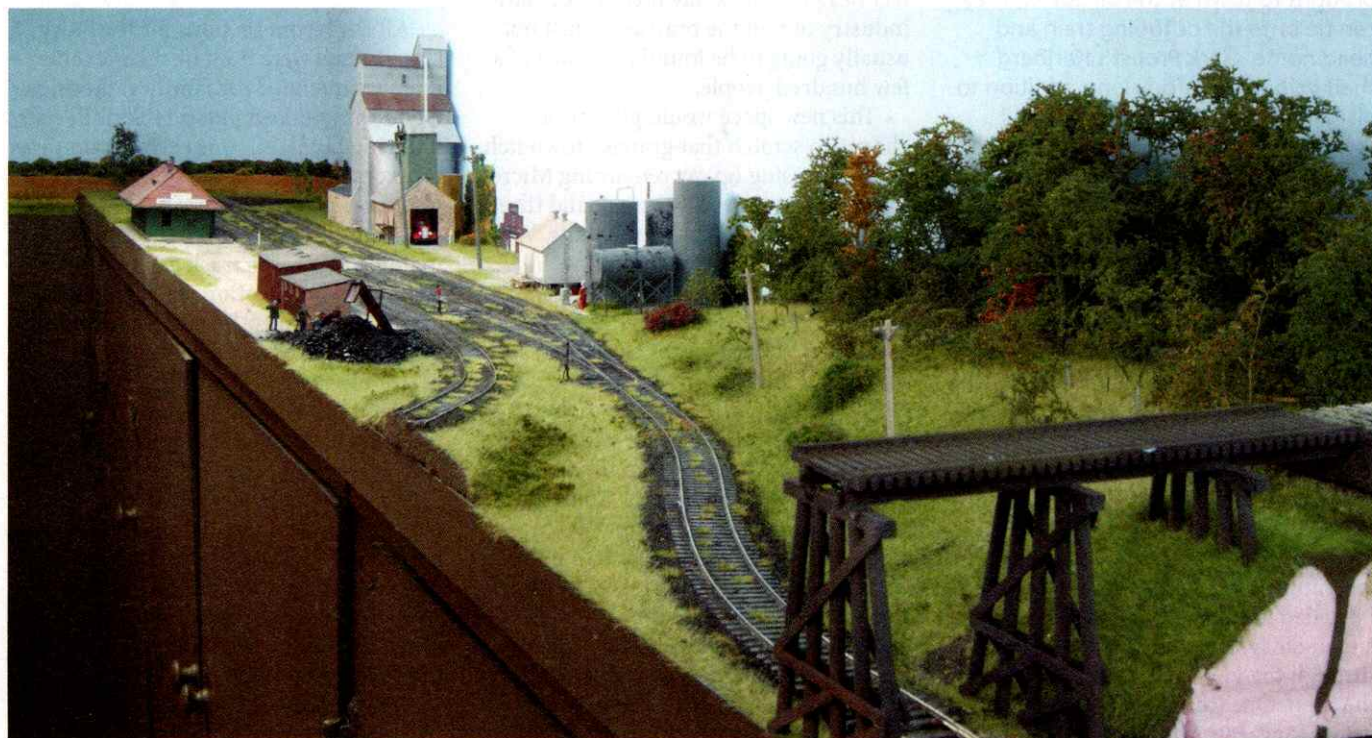
With the track laid and wired and topographical features in place, the next question was, what online customers would I put in this new town? To effectively model the prototype, you have to model what was actually located within the modeled area. After scratchbuilding structures that were as accurate as possible on two layouts, I had a lot of pent-up freelancing creativity. On the Story City Branch, I let some of that out and took some liberties to enhance operations. I planned on going the full Monty on this section.

The plan was to construct the buildings on bases so they could be removed and replaced with something different as the mood struck. I made several bases in two sizes out of .060" styrene sheet. I figured that thickness would be rigid enough for handling, but not too tall to be disguised when set in place. I planned for two customers on the back track and one on the transfer track just off the turnout before the grade started.



I still had the station from my previous layout and planned to use it as a placeholder until I built something to replace it. The station would be on the runaround track with a space for team track loading and unloading. A city street would cross the tracks, dividing the section into four quadrants with a car spot in each.

My layout design philosophy is that a layout should include display attributes. It needs to include ways of focusing the viewer's attention where you want it to go. How could I focus a viewer as they walked up to Karlberg? The street between the four customers would lead to a town scene on the backdrop. The hope is the viewer's eye would be led down the street to the town. Once "in," they could browse the scenes at their leisure and not miss details I wanted them to see. Notice that I said viewer; an operator has other duties and will not be focused on the scene. Usually a visiting operator is a viewer first.



3 This view from the entrance to Karlberg shows the section's entire 9-foot span.

The layout at a glance

Name: Karlberg
Scale: HO (1:87.1)
Size: 15" x 9'-0"
Theme: generic granger road
Locale: upper Midwest
Era: 1950s
Style: shelf
Mainline run: 8 feet
Minimum radius: 30"
Minimum turnout: no. 5
Maximum grade: 4 percent (interchange)
Benchwork: tabletop
Height: 54"
Roadbed: Homasote
Track: Micro Engineering code 55
Scenery: extruded-foam insulation board
Backdrop: photographs
Control: Digitrax Digital Command Control plus ProtoThrottle

It was time to choose my customers. I wanted to build a feed mill and elevator complex as the main business in town. I also wanted a bulk oil dealer, lumberyard, and cement plant. I decided to hold off building the cement plant until later and started industry construction with the oil jobber.

It's not hard to model a realistic oil dealer. All's that's needed is a storage shed, fuel tanks, and a loadout stand. I had leftover tanks to use, and I scratch-built the shed and stand. The base for this customer is shorter than the one I scratchbuilt the elevator complex on. Both are 5" deep because that's the space between the back track and the backdrop, or the front tracks and the fascia.

The elevator is a combination of several I've seen in person or in photos. The crib-style main elevator is flanked by a bag storage shed and a bulk feed house. Digging through my leftovers, I discovered two sheds from the foundry that was on my last layout and a Walthers coal elevator kit. I placed these items alongside the transfer track to represent a lumberyard.

I used photos to extend the layout onto the backdrop. I used my leftover SuperTrees as woods on the hillside to hide where the crossing road's tracks met the backdrop. I got this all done a couple weeks before the RPM meet.

Operating in Karlberg

Many model railroaders overthink operations. They worry that their excitement for operations will wane over time.



4 Isn't it the way it always goes? While one crewman pushes hard on the Armstrong turntable, the other offers moral support. In addition to turning locomotives, the turntable also gives access to the runaround track.

I've found that with a prototypical track plan and a little creativity, operations will hold your interest indefinitely.

Though Karlberg is a standalone mini-layout, it's connected to the end of my branch line layout. Karlberg's simple track arrangement can be quite challenging. By having the interchange track be a switchback from the runaround, as well as having the lumberyard spots in the way, the incoming train needs to pull and spot any cars for that track before proceeding into town and running around their train. Then they can pick up and set out any remaining cars from the back end. Once they have their return train in order, engine facing the correct direction in front, and caboose on the rear, they can leave town.

The interchange track has been described as the universal industry because anything can be picked up or spotted there with no need to model any physical customer. The team track is another universal industry. Besides the cars for those spots, coal hoppers, flats, gondolas, and boxcars can be spotted at the lumberyard; tank and boxcars at the oil dealer; and boxcars at the elevator/feed mill complex.

In early spring of 2019 I had a weak moment at a train show. I bought a brass Milwaukee Road 2-6-2 Prairie-type steam locomotive I thought I could use for the Karlberg run. I shipped the engine off to Peter Hall to paint, but the engine ran so poorly Peter also had to rebuild the thing.

There's a cascading effect that occurs when you introduce a different road's engine into your fleet. Now I needed a Milwaukee Road caboose and matching freight cars to run to Karlberg. I then

needed a justification to run a different railroad's train on my layout.

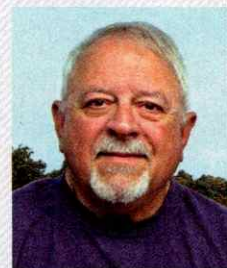
The plan is to have the M&StL branchline trains drop their trains in Story City, run engine light through Karlberg to turn on the turntable, then return to pick up their train. Milwaukee Road trains bound for Karlberg will run the length of the branch via trackage rights, do their work in Karlberg, then return to staging.

Having the freelanced Karlberg section allows me to succumb to impulses to purchase items I wouldn't consider for my more prototypical Story City Branch. Plus, while the M&StL train stops at towns along the way to do its switching, the Karlberg train will have a long run to railfan on its way to its destination. I've got the best of both worlds. **MR**

Meet Clark Propst

Like most modelers of his generation, Clark started with a Lionel train set he received for Christmas when he was 5 years old. Then

when he was about 8, he received an Athearn HO scale train set and has never looked back. During the warmer months Clark and his wife, Eileen, enjoy fishing trips to Northern Minnesota and Northwest Ontario.





A fresh take on HANDLAID TRACK

Commercial tie strips and turnout kits make it easier than ever to lay your own rail

By Pelle Søeborg

Photos by the author

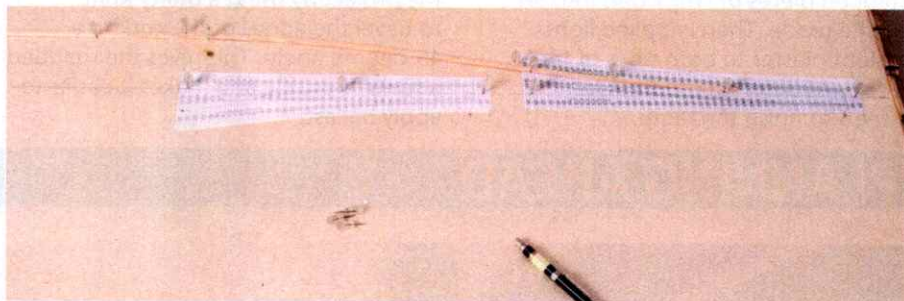
Track is the most important part of a model railroad. It deserves just as much attention as scenery and structures in terms of detailing and painting. When I started work on my 28" x 8'-11" Danefield modules, I wanted to take a break from commercial components and give handlaid track a try.

I've always been fascinated by the free-flowing look of handlaid track but never used it because it lacked details like tie plates and spikes on every tie. On my modules, I took a hybrid approach that combines the best of flextrack and handlaid track. Central Valley Model Works (CVMW) makes injection-molded plastic tie strips that feature tie plate and spike detail. I also used three CVMW turnout kits on the modules. I combined the CVMW products with Micro Engineering codes 55, 70, and 83 rail.

Laying track using CVMW tie strips and Micro Engineering rail took more time, but to me that wasn't a problem. I love laying track and I was in no hurry to get it over with. Laying track is calming to me. It's also a project one can easily leave and come back to. Better yet, only a few tools are needed: a rail cutter, a soldering iron, a sharp hobby knife, bent-nose pliers to drive the spikes, and a drill.

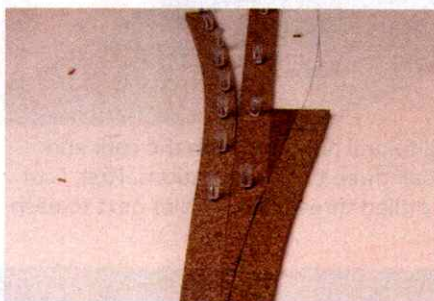
Contributing editor Pelle Søeborg used Central Valley Model Works plastic tie strips and Micro Engineering rail to handlay track on his HO scale Danefield modules. Painting and weathering further enhanced the track.

CORK ROADBED

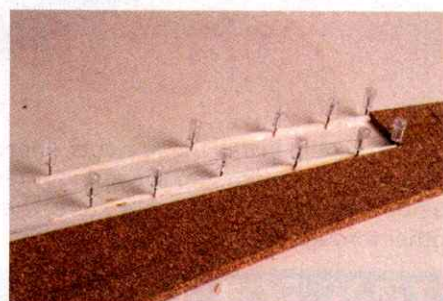


Central Valley Model Works turnout kits come with paper templates. After I marked the center of the main track with a pencil, I placed the templates on the plywood subroadbed.

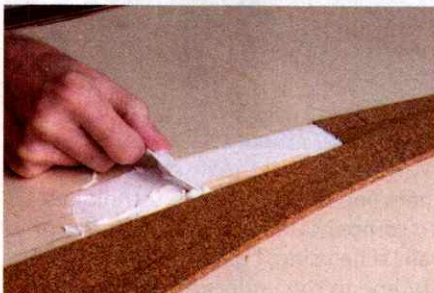
With the templates positioned, I drew centerlines for the siding and spur. A flexible wood stick served as a handy guide for drawing the curved lines.



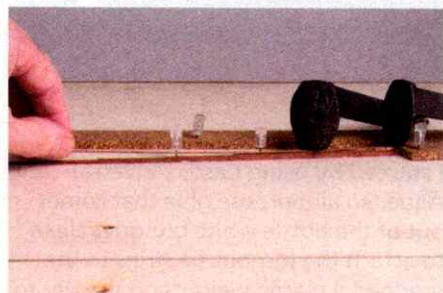
Next, I installed the roadbed. I used .200" cork on the main line. Since the cork I use wasn't originally designed for roadbed, I had to cut it into appropriately sized strips. I secured it to the subroadbed with carpenter's glue.



I built a ramp to make a smooth transition between the siding's .080" roadbed and the main line. The edges of the frame are wood that I cut into strips and sanded. Pushpins held the wood in place while the glue dried.

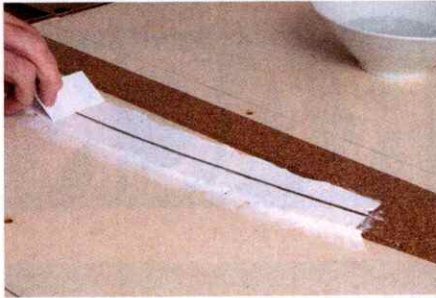


After I removed the pins I filled the area between the wood strips with lightweight plaster. I used a scrap piece of styrene as a screed to smooth the plaster. The transition from the cork to the plaster should be smooth.



On the other side of the main is a spur, which I laid directly on the subroadbed. To create a ramp up to the main line, I glued thin pieces of stripwood together along the centerline. Full-size spikes make great weights!

CORK ROADBED (CONT'D)



Once the glue dried I sanded the stepped pieces of stripwood into an gentle grade. Then I applied lightweight plaster to both sides of the wood. As before, I used a styrene screed to finish the ramp.



I completed the roadbed phase of the project by using a utility knife to bevel the edges of the cork to a 45-degree angle. This gives the roadbed a realistic profile and makes it easier to apply ballast.

Materials list

Central Valley Model Works

2001 main line tie strips
2002 branch line tie strips
2771 no. 7 left code 70 turnout kit
2881 no. 8 left code 83 turnout kit
2882 no. 8 right code 83 turnout kit

Details West

926 code 83 no. 8 frog set

Micro Engineering Co.

17055 code 55 nickel silver rail
17070 code 70 nickel silver rail
17083 code 83 nickel silver rail
30106 small spikes

PLANNING AHEAD

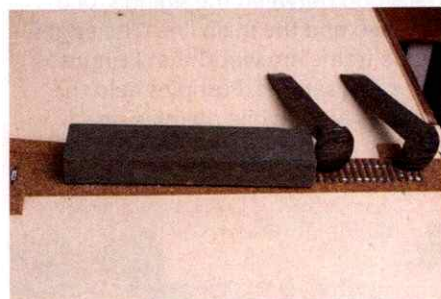


Before I could install the turnouts, I needed to drill holes through the cork and plywood subroadbed for the spring wires at all three turnout locations. First, I cut a slot in the cork with a hobby knife. Then I drilled three to four holes next to each other through the plywood.

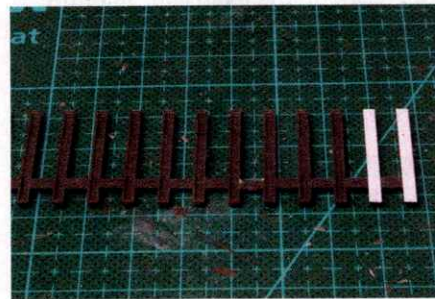


Next, I used a carving bit in a motor tool to mill away the material between the holes until I'd created a slot. I glued a piece of Evergreen rectangular styrene tube into the slot. The smooth tube allows the wire to move freely.

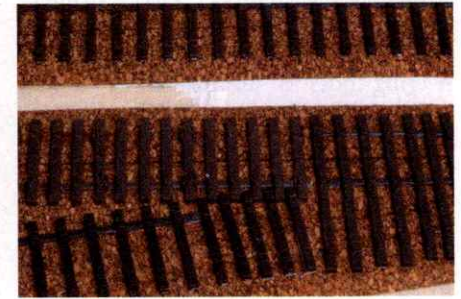
TIME FOR TIES



I started by using Casco Universal Aqua, an all-purpose glue that comes out of the bottle white but dries clear, to attach the turnout tie strips to the roadbed. I placed weights on the ties to hold them in place while the glue dried.

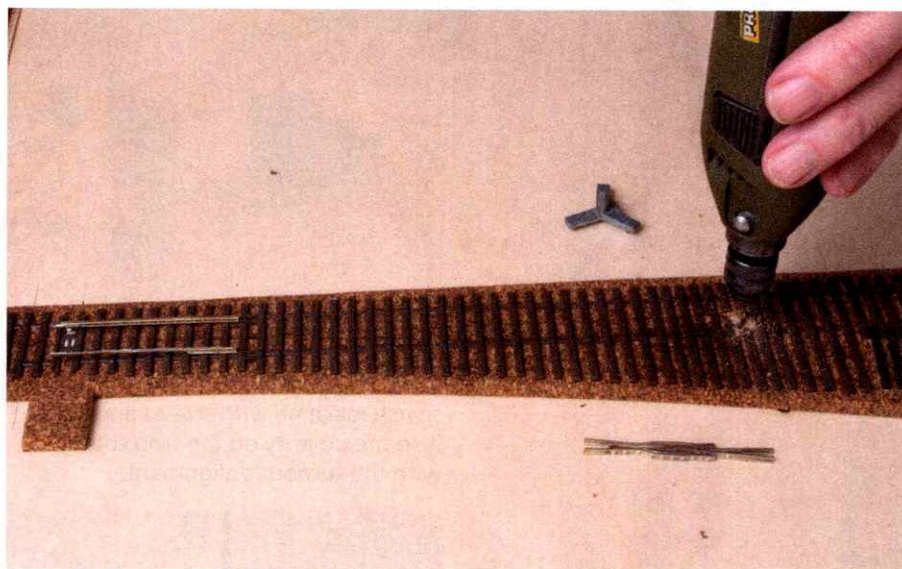


Then I added the tie strips for the main line using the same techniques. To compensate for the three codes of rail I'd be using, I glued thin strips of styrene to the underside of the ties where the siding and spur connect to the main line.

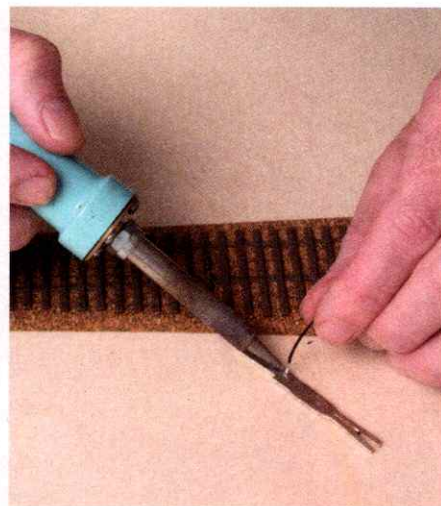


Central Valley Model Works also makes strips for branch lines that have wider spacing between the ties. I used these tie strips on the siding and spur. I secured the ties using the same techniques as before. To prevent any unwanted bumps, I put weights on the ties while the glue dried.

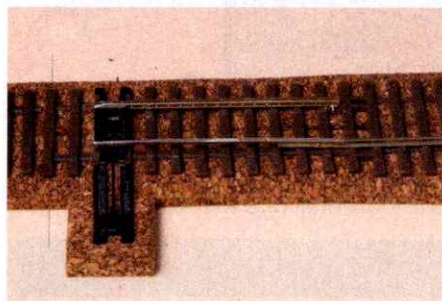
TURNOUT TIPS



Though the CVMW no. 8 turnout kits include a frog, I swapped it out for a Details West no. 926 white-metal casting. Before installing the frog permanently, I drilled a hole through the roadbed and subroadbed for a feeder wire.

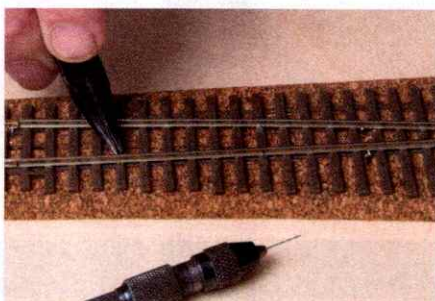


I then soldered the feeder to the underside of the frog casting and glued the frog in place with cyanoacrylate adhesive (CA). I also soldered feeders to the switch points.



The turnout kits include parts to make a positionable switch stand target, but I couldn't make it work properly. Instead, I trimmed the switch rod parts and made a more realistic, but non-working, switch stand.

Once that was done, I glued the headblocks to the cork roadbed. I also installed the switch rod and point rails.



I cut the closure rails to fit and soldered feeder wires to them. Then I tacked the rails to the ties with CA.

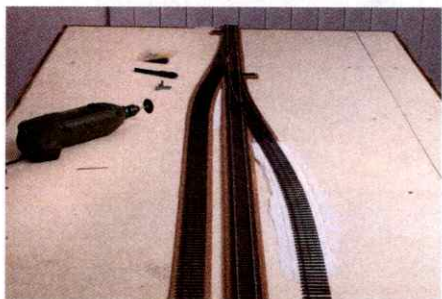
I further secured the closure rails with small spikes from Micro Engineering, drilling pilot holes first.

To prevent short circuits, I glued a sliver of styrene between the closure rails and frog.



I applied the frog, switch points, and closure rails to all three turnouts before I installed the stock rails.

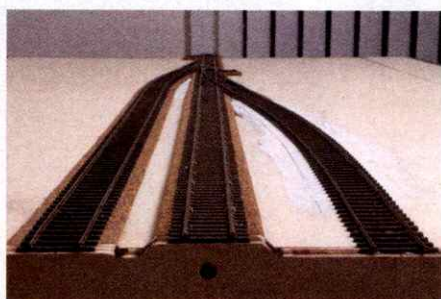
When I added the stock rails, I started with the diverging route, as shown in the photo above. The molded tie plates do most of the work holding the rails in place. Only a few spikes were needed.



After the diverging stock rails were in place, I installed the rest of the code 83 mainline rail. Installing rail on the tie strips is pretty easy. After I set the rail in place, I bent the spike head castings down with the tip of a screwdriver. I spiked the rail at each end where the module sections connect.

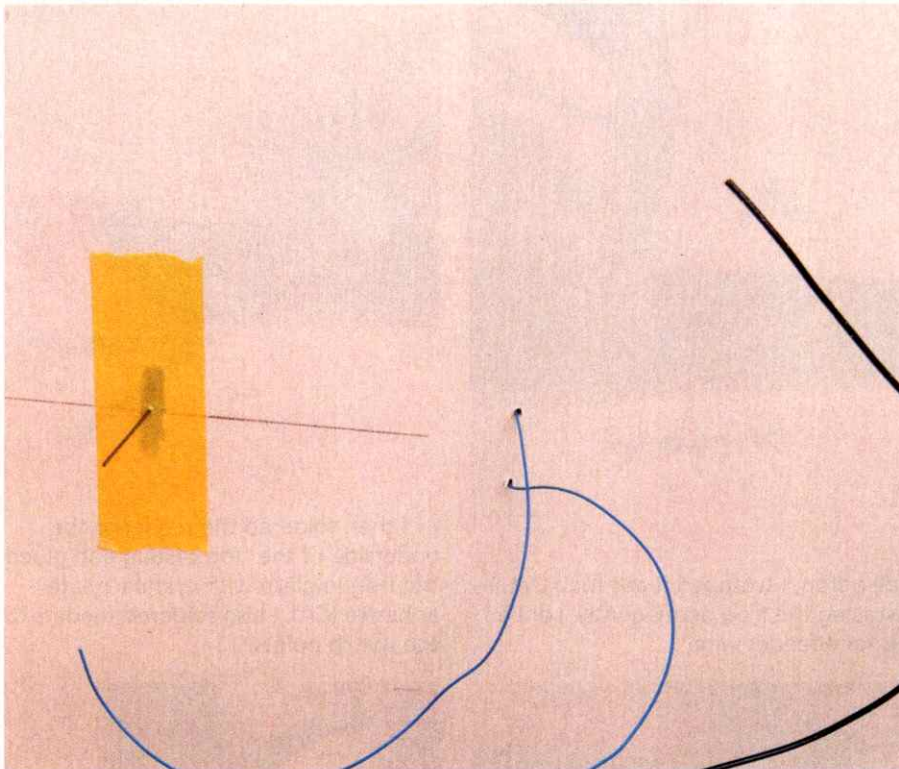


Details like rail braces (black plastic pieces on brown ties) and joint bars are included with the turnout kits. I glued the rail braces to the ties with plastic cement and the joint bars to the rail with CA.

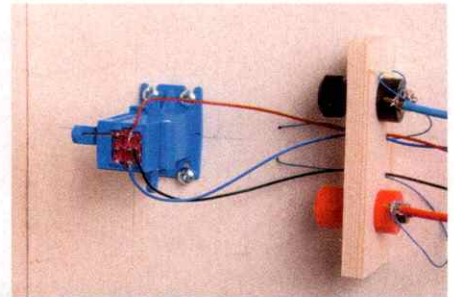


Finally I installed code 70 rail on the siding (left) and code 55 on the spur (right). The branch line tie strips don't have bendable spike heads. Here, I had to secure the rail with small Micro Engineering spikes every 2 inches.

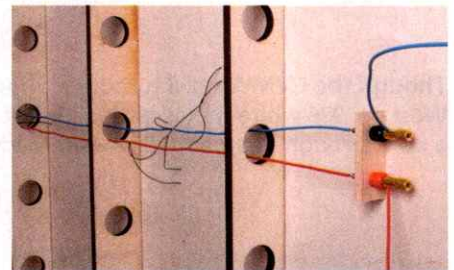
TURNOUT CONTROL



I used **Blue Point** manual turnout controllers on my modules. First, I centered the switch points and inserted the spring wire. To keep the wire centered, I placed a piece of masking tape over the slot I'd cut in the plywood.

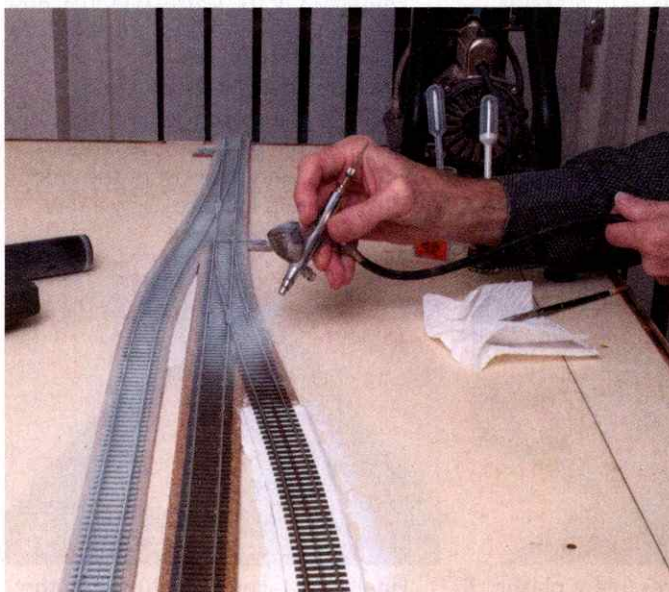


Next, I placed the supplied template under the turnout and drilled four mounting holes. Then I attached the switch machine with screws and wired it so the polarity on the frog changes with the turnout's alignment.



I centered a set of bus wires (blue and red) under each module. Then I attached the black feeder wires from the individual rails to the bus.

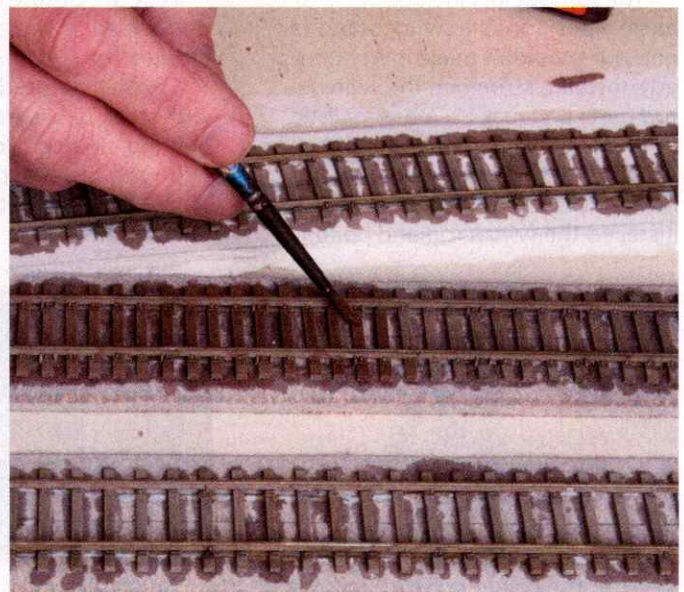
PAINTING TRACK



Paint is the most important aspect when it comes to making track look realistic. I used a combination of paint and washes.

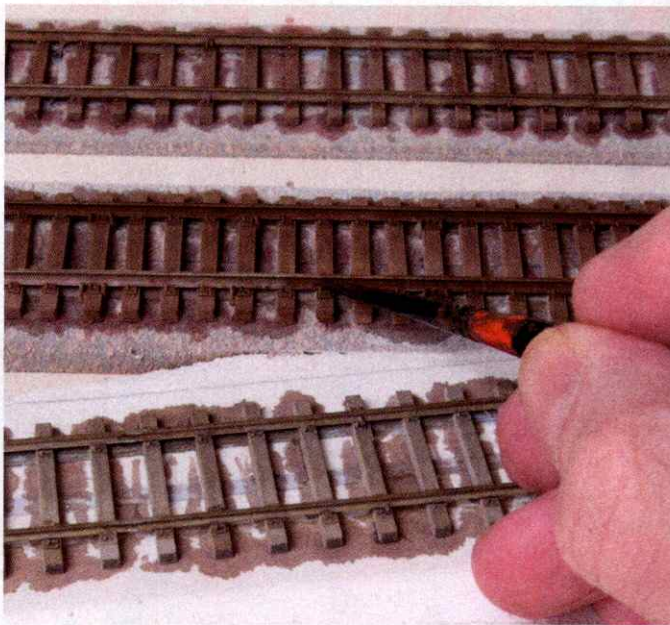
I first applied a light gray base coat to the track. Why gray? I find that washes look best when applied to a light, neutral surface.

When painting track, wear a respirator and make sure the room is well ventilated.

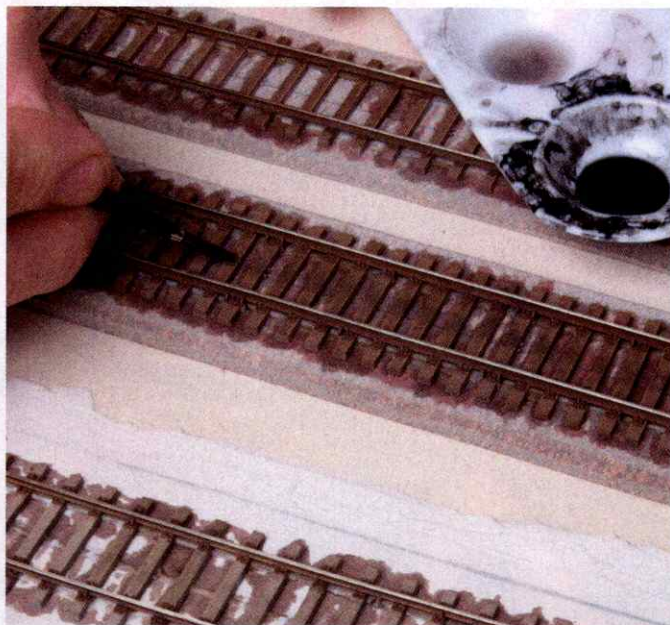


I made my washes using Vallejo Air acrylics Tank Brown (041), Camouflage Black Brown (042), and Black (057), thinned with airbrush thinner. I first applied a wash of Camouflage Black Brown to the rails and ties on the main, siding, and spur. Once that dried, I brushed a Tank Brown wash on the main and Camouflage Black Brown wash to the siding. I didn't apply a second coat to the spur.

PAINTING TRACK (CONT'D)



I painted a scrap of rail in various rust brown shades and held it against the ties to see which color looked best. I settled with a color mixed from a 2:1 ratio of Model Master Dark Drab and Leather. I applied this to the rails and tie plates.



Finally I used a paintbrush to apply a black wash down the center of the ties on the mainline track. This somewhat subtle wash simulates grease and oil that drips off locomotives and freight cars.



If, like me, you've been on the fence about handlaying track, I hope this article has encouraged you to give it a try. Though it's not as fast as using off-the-shelf products, I think the end results are worth the time investment. [MR](#)

A team effort

A husband and wife combine forces to model the New England region where they both grew up

By Ray and Mary Ann Fontaine • Photos by Lou Sassi



1 Boston & Maine Alco RS-3 no. 1542 pulls its freight past Pamson Manufacturing Co. and Longley Lumber in Claremont Junction, heading toward Brattleboro, Vt., on Ray Fontaine's HO B&M layout.

on the B&M





2 This overall view of Ray's HO scale layout shows Deerfield, Mass., on the right, White River Junction, Vt., at center, and Claremont Junction, N.H., at left.



3 Boston & Maine no. 1567, an Electro-Motive Division GP7, passes Deerfield. The locomotive is a Walthers Proto 2000 model. Mary Ann weathered the station.

For many years, I enjoyed modeling remote-control airplanes. As I got older, I wanted a more creative hobby that I could do at my leisure at home.

My first attempt to get into model railroading was a 5 x 9 plywood table with some scenery and an oval of track. I ran the locomotive in circles again and again and got discouraged, because I wanted more out of a hobby.

Then a friend of mine who also had model trains suggested I take in some layout tours, which I did with my wife, Mary Ann. My first tour was at an open house hosted by Jason Fontaine (no relation). [Jason's HO scale Southern New England RR appeared in the July 2010 *Model Railroader*. – Ed.] Once I wandered through his layout, I knew right then what type of layout I really wanted! I asked Jason if he would help me design and build a layout. He agreed, and things

really moved along quickly. Jason engaged the assistance of Dick Elwell and Bill Duffe, Jason's friends of many years, to get us started. And boy, did they get us started on the right track!

Benchwork and wiring

When Jason came to our house to see our basement layout space, he told us it was definitely too small. The same assessment came from Dick and Bill, so much rearranging took place. We moved a large cabinet, television, exercise equipment, and numerous shelves. With Mary Ann's blessing, the planned railroad took over the entire room.

Now track planning and benchwork could begin. It was amazing how our combined efforts got the layout started quickly. There's so much planning before the actual structure building and scenery can take place.

The layout at a glance

Name: Boston & Maine
Scale: HO (1:87.1)
Size: 14 x 25 feet
Prototype: Boston & Maine
Locale: Springfield, Mass., to White River Junction, Vt.
Era: Autumn, late 1950s
Style: around-the-walls
Mainline run: 80 feet
Minimum radius: 32"
Minimum turnout: no. 5
Maximum grade: less than 1 percent
Benchwork: L-girder
Height: 48"
Roadbed: cork
Track: Walthers code 83
Scenery: extruded-foam insulation board, Structo-Lite, and plaster gauze
Backdrop: photo backdrops
Control: NCE Digital Command Control

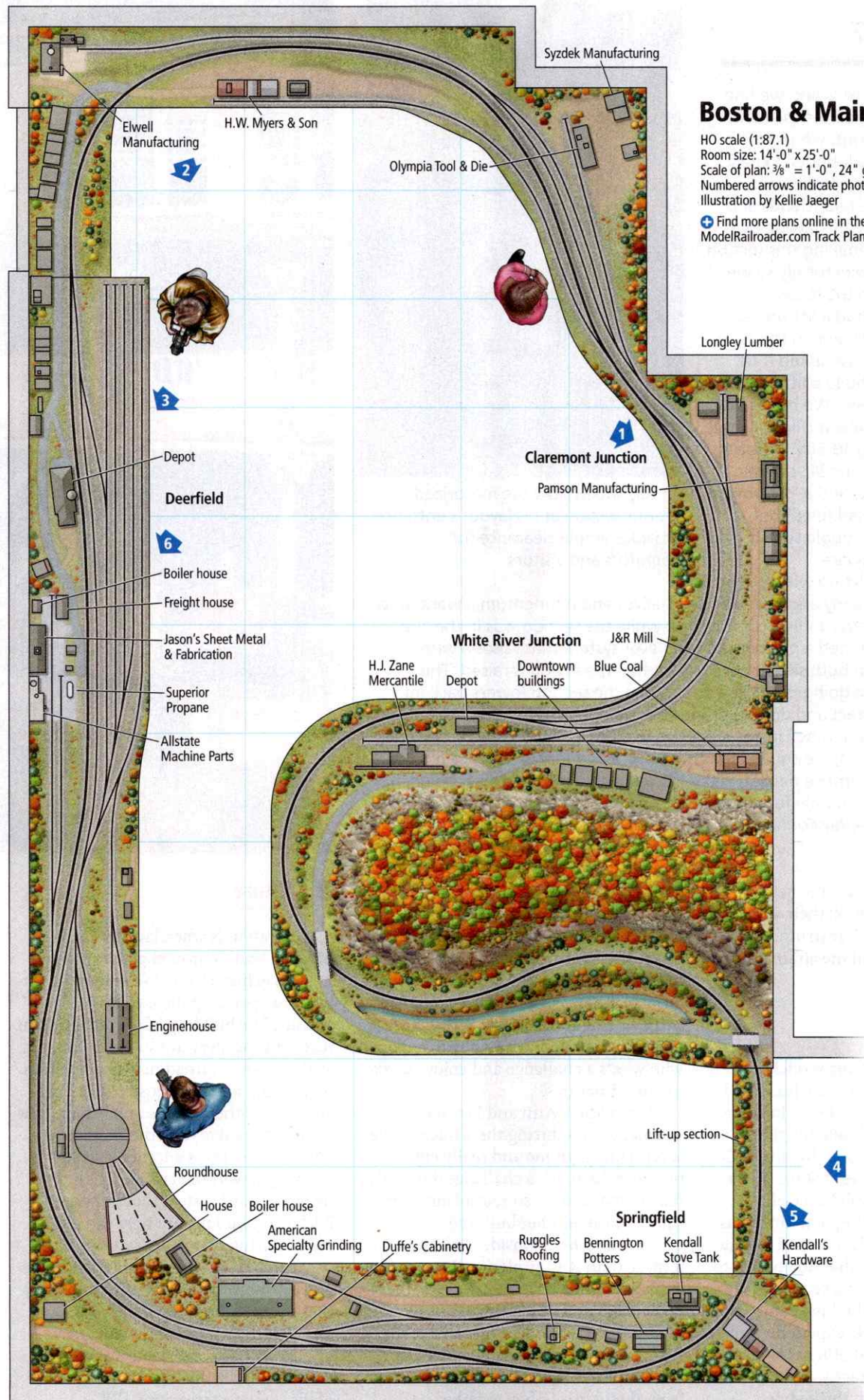
Scenery

When I worked on scenery alone, it wasn't always with the best results. Mary Ann saw what I was doing and got involved. Since she has wonderful artistic abilities, I gladly said yes when she offered to work on some scenery for me. Her eye-catching scenes and detailing is what brought our layout to a higher level. Scenery, painting, and weathering are definitely Mary Ann's strengths, and she keeps getting better and better.

Jason helped me throughout the process of layout design and construction. It became a joke between us how Jason would come in and work on the layout, then leave me to clean up the mess.

We're modeling autumn in the late 1950s, so lots of foliage would be needed. Dick Elwell offered to make some trees from peppergrass. He made almost 300 trees for us. He also told us to buy at least 50 more bundles of peppergrass, from which Mary Ann and I made hundreds more. Being new to the hobby, we thought that would be enough to do the whole layout. Jason and Dick laughed and said we'd need probably triple that amount. Well, after we planted more than 600 trees, the mountain was only half done! Now I see what they were talking about. We had to get another 100 bundles of peppergrass to finish that mountain and the smaller scenes.

As Mary Ann and I were diligently working on the layout, we focused on completing different areas and scenes. Suggestions and input from Jason, Dick,



Boston & Maine

HO scale (1:87.1)
 Room size: 14'-0" x 25'-0"
 Scale of plan: $\frac{3}{8}$ " = 1'-0", 24" grid
 Numbered arrows indicate photo locations
 Illustration by Kellie Jaeger

Find more plans online in the
 ModelRailroader.com Track Plan Database.

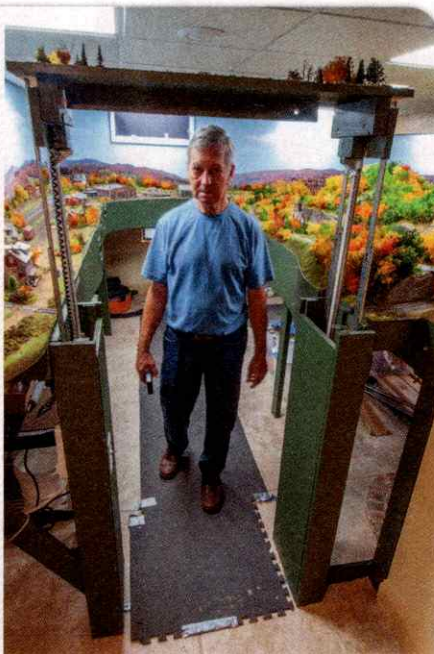
The lift up

For the track plan to work, we had to have track going across the main entrance to the layout, which made for an awkward duck-under. I knew this wouldn't be very convenient, especially when we had friends and family over to enjoy the layout. We were interested in making this section lift out of the way electrically so we could just walk into the room.

Jason Fontaine had a lift-up section on his layout [shown in the June 2019 MR – Ed.], and we asked if he would design and build a lift-up for us. He happily agreed. We bought 2 Firgelli high speed electric linear actuators, two Aweking 10-60V DC motor speed controllers, four 24" drawer slides, two brackets, and a 12V power adapter. We also used telephone cords, L-brackets, a toggle switch, and miscellaneous hardware.

Jason built this lift-up with a great safety feature. Since my engines have keep-alives and momentum, I wanted to prevent engines from running off the track while the section was in the "up" position. Jason designed a mechanical cantilever system that raises a wire between the ties on both sides of the track when the lift-up is raised. This stops any train from going over the edge. When the section lowers back into place, the wires retract and disappear into the roadbed so trains can pass over.

Plywood was used to box in both sides of the lift-up, and after we painted it green like the fascia, it disguises that mechanical wonder. It's fun to flip the toggle switch and surprise people as the lift-up pops up! It's a great design, and we consider it not only functional and convenient, but a great conversation piece, as well. – Ray Fontaine



4 Ray shows how the motorized lift-out section at his layout's entrance provides ample clearance for operators and visitors.



and Bill pushed us to become better modelers. We always took their advice to heart. Our friends were instrumental in helping Mary Ann and me attain a layout at this level.

Structures

Having never built any model railroad kits before, I wasn't sure how hard it would be. But I was up for a challenge. I built several kits and took my time, and they came out pretty good. My third kit was Kendall's Hardware, a South River Model Works kit by Bob Van Gelder. When I got into building that kit, it was absolutely fantastic. The detailed instructions, photos, and tips that Bob puts into his instructions made it a very challenging but rewarding build. I felt completely satisfied with the whole experience and have since built several other of Bob's kits. They came out exactly as the instructions say, which thrilled us.

A learning experience

Through these years we've learned so much and continue to learn. Some of the most fun is trying new products, weathering techniques, and scenery touches while having fun doing it. I would definitely recommend this hobby to anyone who wants a challenge and enjoys working in miniatures.

When Mary Ann and I travel to warmer climes during the winter, I take several kits with me and really enjoy building them. It's a challenge, but it also relaxes me, and it's so rewarding every time I finish another building.

Since this is an "inside" hobby, I enjoy it more than R/C airplanes. Because that was an "outside" hobby, it was weather-dependent, and Mary Ann wasn't involved. With model railroading, Mary Ann can use her creativity and artistic talents, plus we get so much pleasure from doing this hobby together.

The future

Operation is when layouts come to life, and that's our next goal, which we hope to achieve soon. We're looking forward to operating the layout with friends. The building of the layout, structures, and scenery are so much fun, but as the model railroad nears completion, we're eager for the next step. I've operated a few other layouts and believe that being interactive with the trains and with our friends is another level in enjoying a working layout. I plan on using the card system that Jason and Dick use, and I'm sure they can guide me in setting up my operations.

As our layout began, our friendships grew stronger, and we realized not only that we enjoy building the layout, but also that the camaraderie was just as important. Having friends to help and encourage us with our modeling is one of life's greatest treasures. **MR**



5 No. 1567 pulls up to Kendall's Hardware in Springfield, Mass. This is a South River Model Works kit, and both Ray and Mary Ann consider it their favorite structure on the layout.



6 Central Vermont switcher no. 8093 delivers a tank car to Superior Propane in Deerfield, Vt. Allstate Machine Parts is in the background.



Meet Ray and Mary Ann Fontaine

Ray and Mary Ann were both born and raised in Chicopee, Mass. In 1976 they moved to Brimfield, Mass., where they live today. They've been married 55 years and have three children, eight grandchildren, and one great-grandchild.

Modeling Thurmond,

This layout was designed to be a 3-D work of art

By Lance Mindheim

Photos by the author unless noted

One of the more iconic rail scenes in the United States was the Chesapeake & Ohio's (C&O, now CSX) main line passing through Thurmond, W.Va. A favorite among railfans, it's one of the more photographed areas in the country.

There's a reason it's such a timeless favorite. The prototype makes sweeping horseshoe-like curves on dense tree-lined bluffs following the banks of the New River's path through the Allegheny Mountains. With virtually no room to spare between the river's edge and the mountains, somehow the C&O found a way to shoehorn in its service facilities, a unique, ultra-narrow station, and a massive coal tower. Dovetailed tightly among the rail scene is the tiny town itself, consisting of several turn-of-the-20th-century brick structures, a post office, and a few homes.

Moving to the present, the line is now CSX and much of the town (coal tower, depot, and brick retail buildings) has been preserved by the National Park Service. [Learn more about Thurmond, W.Va., on the Park Service's website at nps.gov/neri/learn/historyculture/thurmond.htm – Ed.]

Animated 3-D art

Model railroading is a broad umbrella that encompasses a large range of how people want to experience the hobby. Not every modeler wants to follow the more traditional approach.

Recently, I was approached by a customer who was so taken by Thurmond that he wanted a copy of it in his basement, not to extensively operate (which is good, because trains just pass



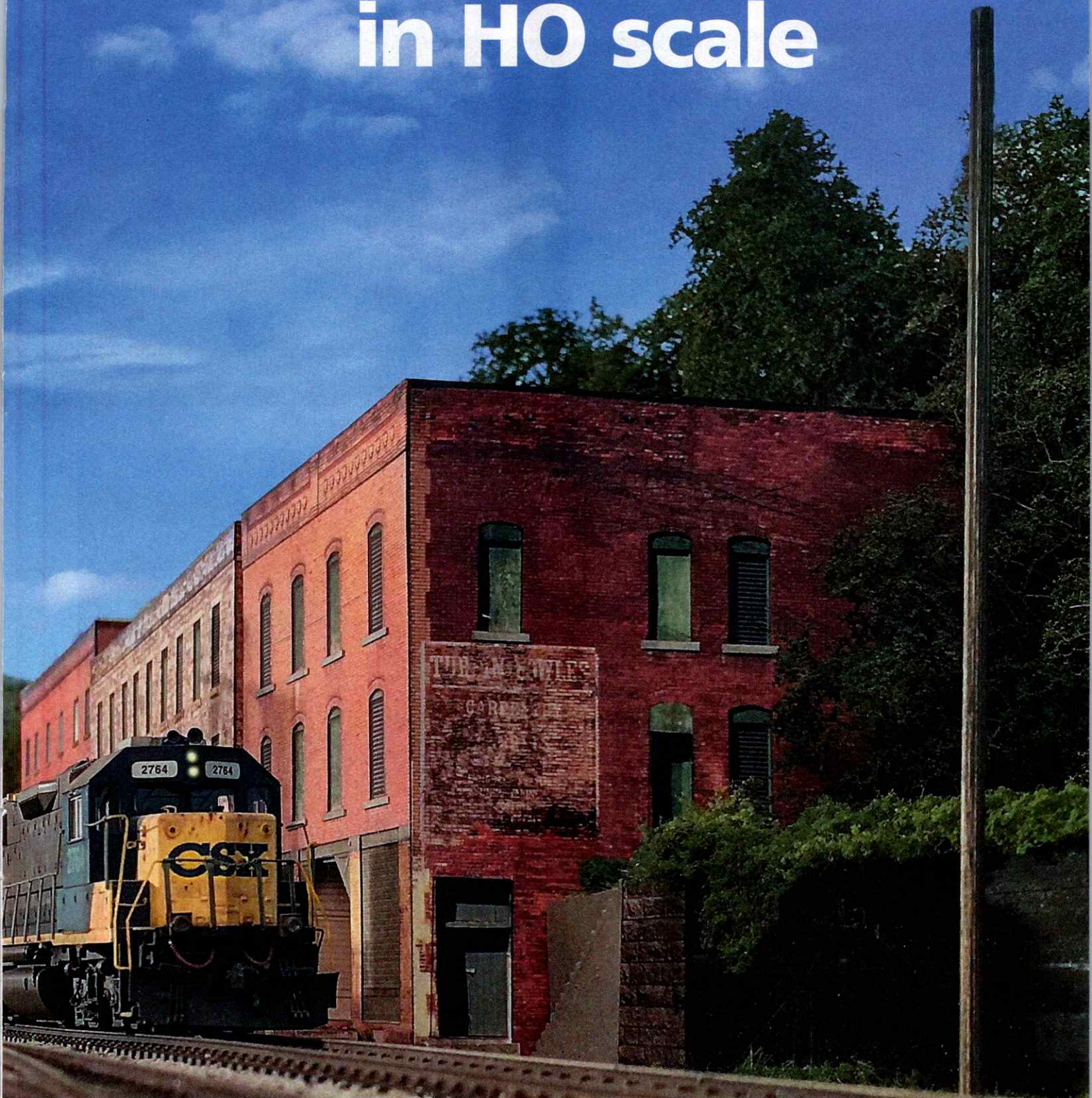
A Chesapeake & Ohio local goes about its work in Thurmond, W.Va., in 1983. Thurmond is a popular modeling subject. Paul Dolkos photo



W.Va.,

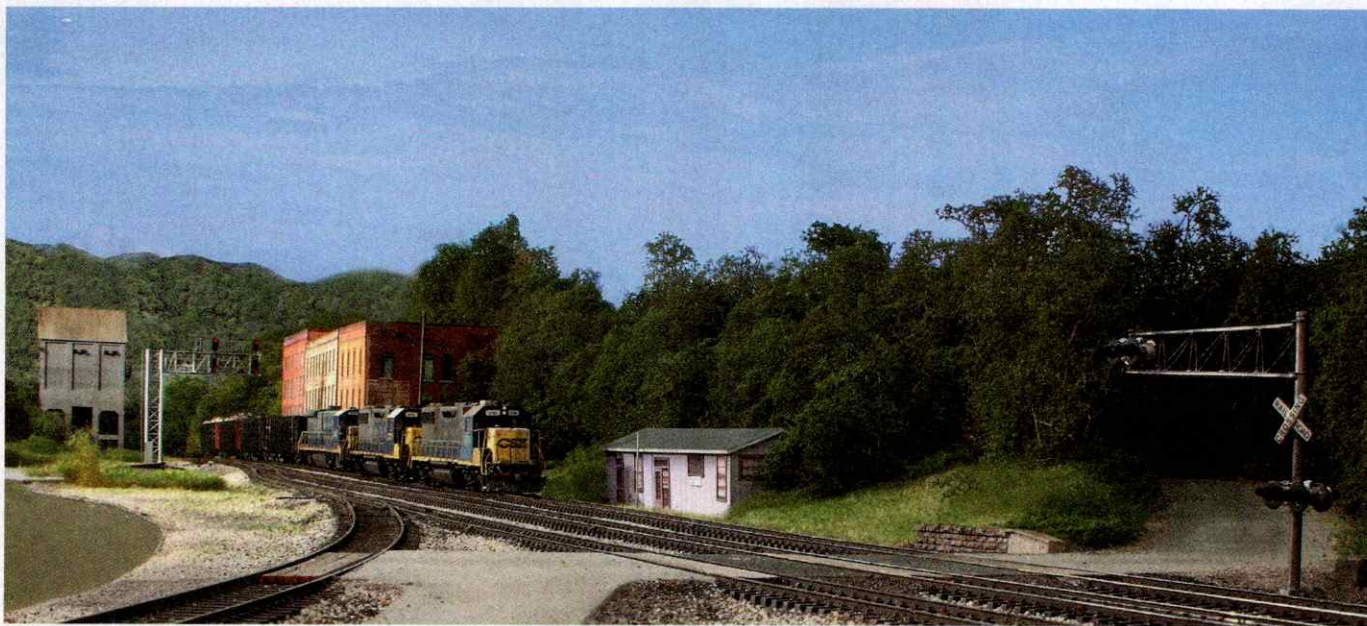
in HO scale

① In this iconic scene, reduced to HO scale, a CSX coal drag crawls through Thurmond, W.Va. Lance Mindheim designed and built this scene for a client as part of a larger model railroad. This portion of the layout is roughly 21 feet long by 30 inches wide.





2 This overall shot shows how the layout fits into the owner's the billiard/rec room. Photo by customer



3 Thurmond Road slices diagonally through town, running between the post office and the distinctive passenger station (out of view to the right in this photo).

through), but rather to simply take in and enjoy every time he walked into his billiard/rec room.

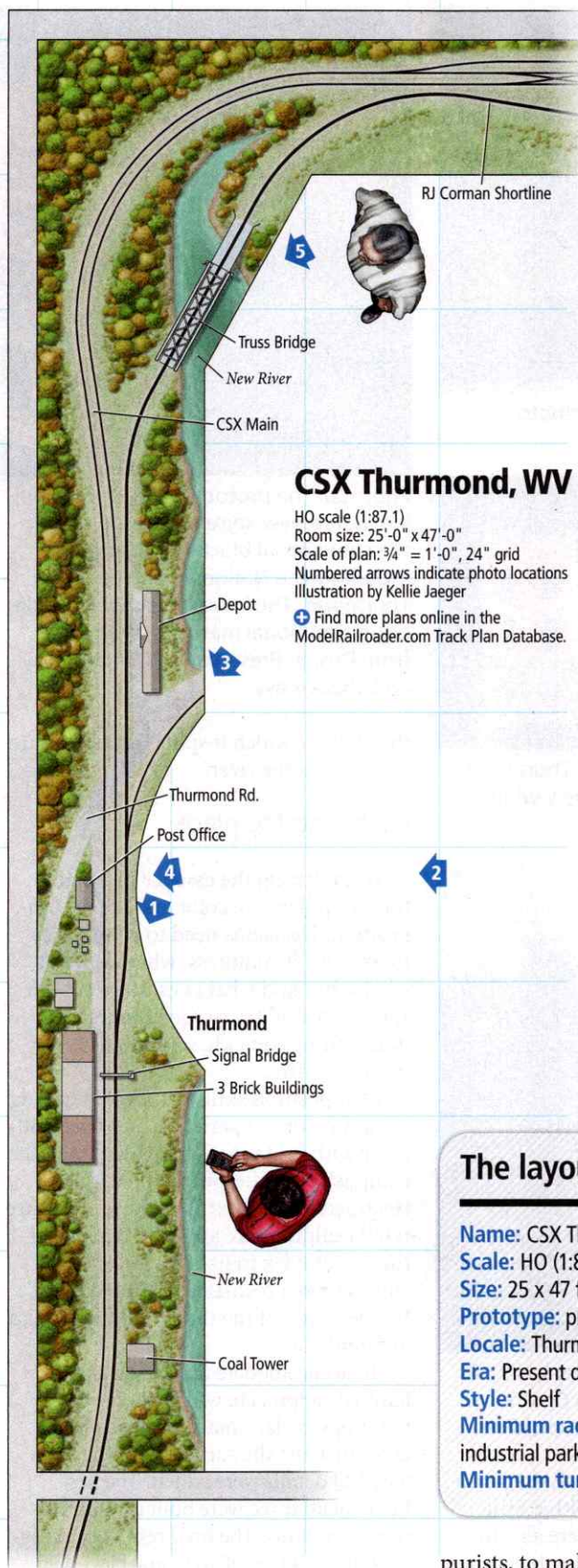
Essentially he wanted a 3-D piece of art with the animation of long coal trains slowly winding through the scene. Because he also was interested in operations, that role was filled by additional

layouts on the flanks in adjoining rooms. I built the centerpiece and he's building the layouts on either side.

The non-Thurmond portions of the overall layout are proto-freelanced versions of Charleston, W.Va., and RJ Corman's "West Virginia" branch line that splits off at Thurmond, crosses the

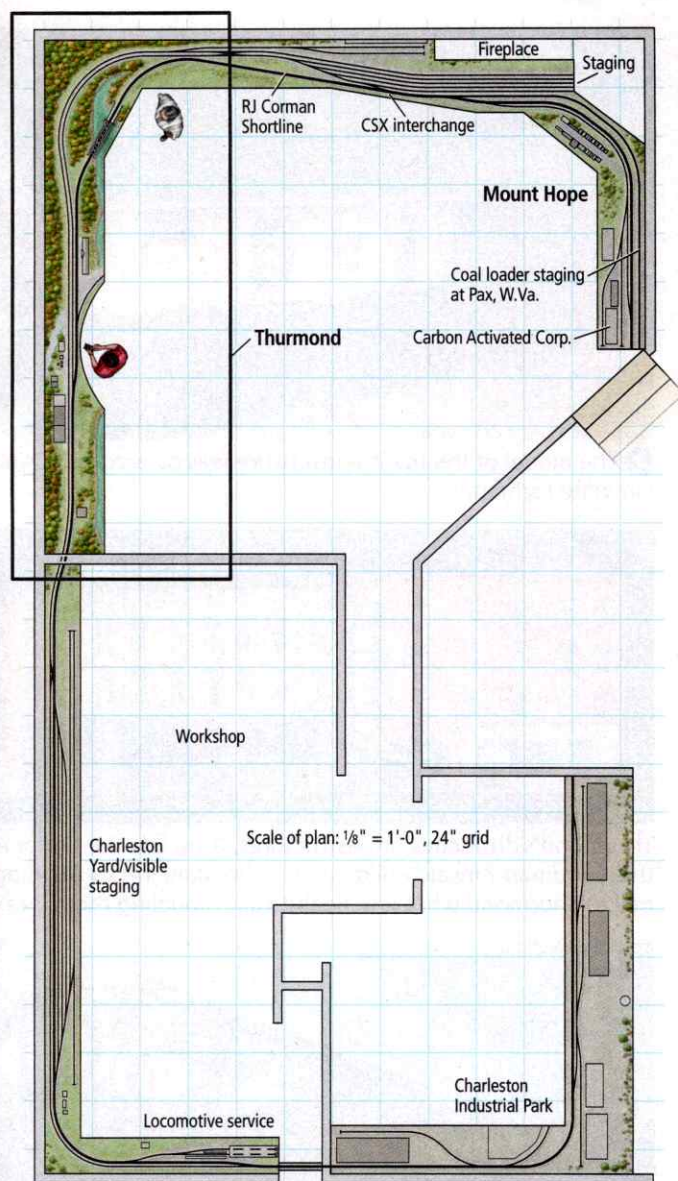
New River, passes through Mt. Hope (where it services a Carbon Activated plant), then terminates at a coal unloader at Pax. On this layout we only modeled the line as far as Mt. Hope and represented Pax with a staging track.

At the other end of the Thurmond section is Charleston Yard combined with



CSX Thurmond, WV

HO scale (1:87.1)
Room size: 25'-0" x 47'-0"
Scale of plan: 3/4" = 1'-0", 24" grid
Numbered arrows indicate photo locations
Illustration by Kellie Jaeger
Find more plans online in the
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The layout at a glance

Name: CSX Thurmond, W.Va.
Scale: HO (1:87.1)
Size: 25 x 47 feet
Prototype: proto-freelanced CSX
Locale: Thurmond, W.Va.
Era: Present day
Style: Shelf
Minimum radius: 32" main, 24" in industrial park and RJ Corman shortline
Minimum turnout: no. 6

Maximum grade: none
Benchwork: box girder
Height: 56"
Roadbed: birch plywood
Track: Peco code 83 flextrack
Scenery: extruded-foam insulation board
Backdrop: hand-painted on medium-density fiberboard
Control: NCE wireless Digital Command Control

visible staging, a locomotive servicing area, and the Charleston Industrial Park.

Having it all

When we start planning a layout we start with the natural desire to be

purists, to make an exact replica of the area we're interested in. Reality quickly sets in, however, when we try to match our always-too-small space with the miles that the actual railroads occupy.

Further complicating things is that the shape of our space usually doesn't match the shape of the prototype. In

addition, we need aisles, which the 1:1 railroads don't.

That leaves us with the choice of being inflexible and trying to shoehorn something into a space that simply won't accommodate it or accept our situation and proto-freelance the area to capture the sense of the region.



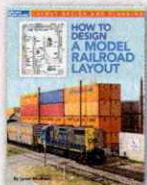
4 The model of the town's post office was constructed using Lance's photo laminate technique.



Thurmond's distinctive brick structures, from left the National Bank of Thurmond, the Goodman-Kincaid Building, and the Mankin-Cox Building, are largely what makes Thurmond what it is. Realistically modeling them was crucial.



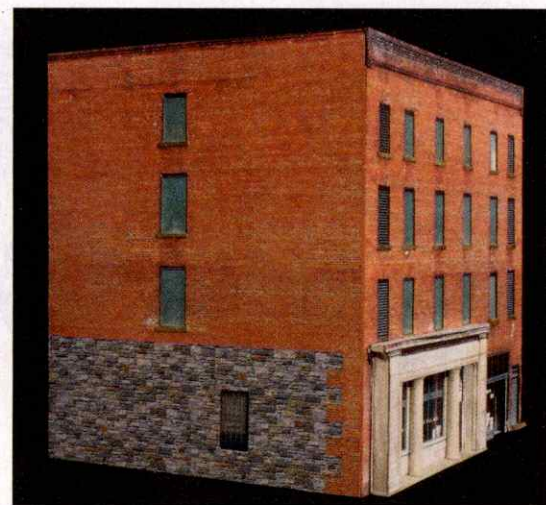
5 RJ Corman's West Virginia branch line to Pax (and through Mt. Hope) splits off near the station and crosses the New River. The bridge was made from Central Valley and Micro Engineering kits. The truss piers were from Chooch Enterprises.



Learn more about layout design in Lance Mindheim's new book, *How To Design A Model Railroad*, to be released in spring

2021. Order your copy at KalmbachHobbyStore.com.

For the Thurmond project, the prototype was pretty linear, so with a little selective compression we were able to capture its essence. All of the structures in Thurmond are built to exact scale. The biggest change of layout vs. prototype was the location where the RJ Corman bridge splits off the main by the depot and crosses the New River. Practicality dictated moving the bridge toward the corner of the layout and changing



Photos of the prototypes were laminated over styrene cores to make the commercial block in Thurmond, including The National Bank of Thurmond. The lower levels were made using traditional methods, with parts from Design Preservation Miniatures and Shapeways.

the angle at which it splits from the main and crosses the river.

Capturing the place

In capturing the essence of a place, the two pillars are color and scene composition. Decisions need to be made as to what we'll compress, what we won't, what stays, and what goes. If we get too aggressive and try to squeeze in too much, things quickly spiral to a toy-like caricature.

Composition skills come from having great mentors, experience, and trial-and-error with 3-D mock-ups. Once I had the composition issues worked out, color treatment came next. The three signature retail buildings are all brick, a material that is complex in its coloring and difficult to model realistically. To make it trickier, each of the three buildings was a different color.

To accommodate this I used a photo laminate approach, where photos of the buildings are laminated over a styrene core. To avoid the surfaces looking too flat, 3-D details were added. The first floors of all three were built using traditional methods. The final result is a recognizable rendition of an iconic place. **MR**

Lance Mindheim is a frequent contributor to Model Railroader and its annuals and special issues. He's also the owner of The Shelf Layouts Company Inc. (shelflayouts.com), a custom layout building firm. Lance lives in Silver Spring, Md.

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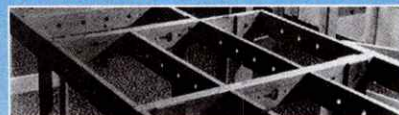


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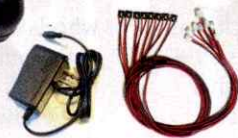
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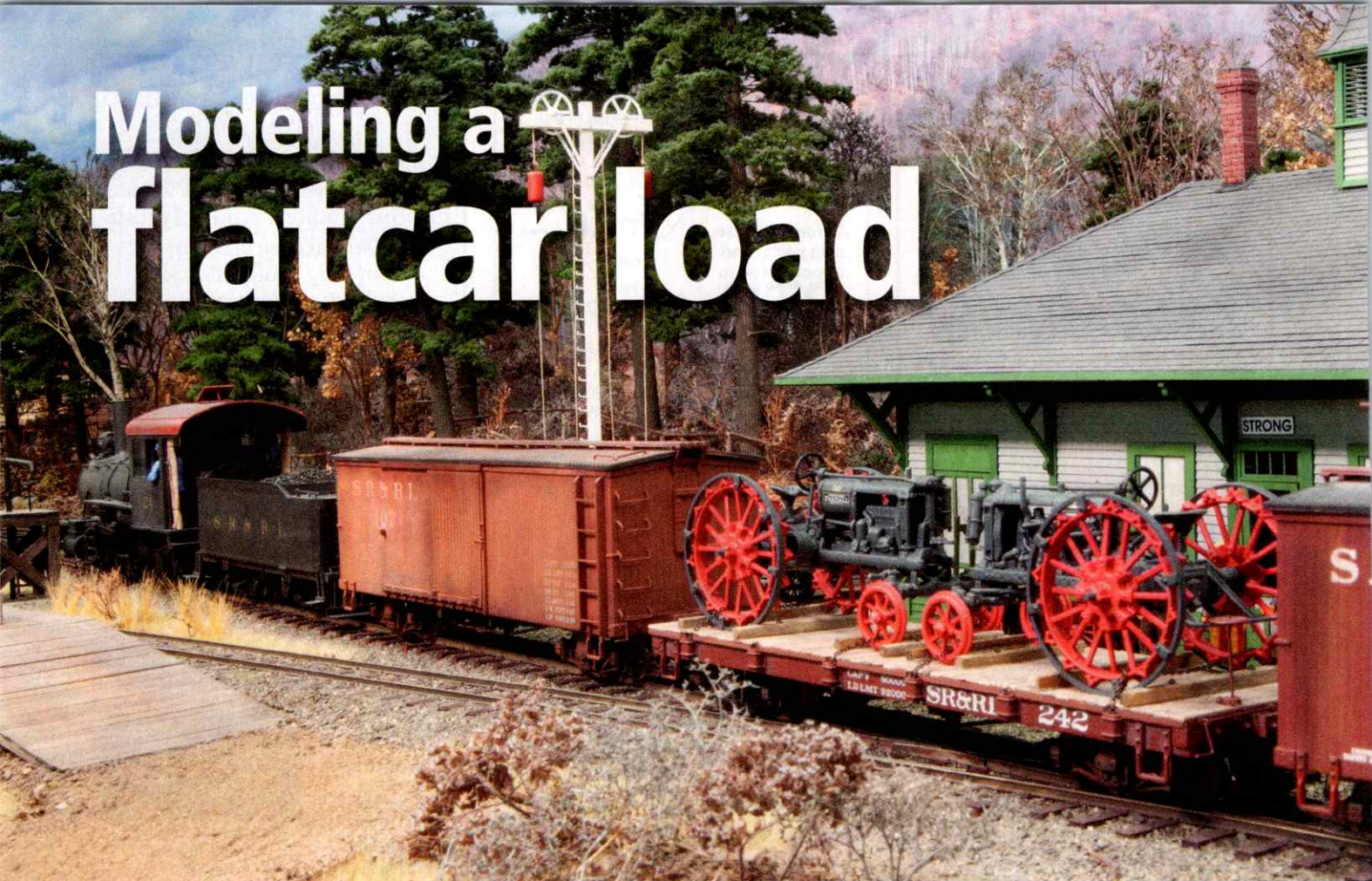
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ModelTrainTechnology.com

Modeling a flatcar load



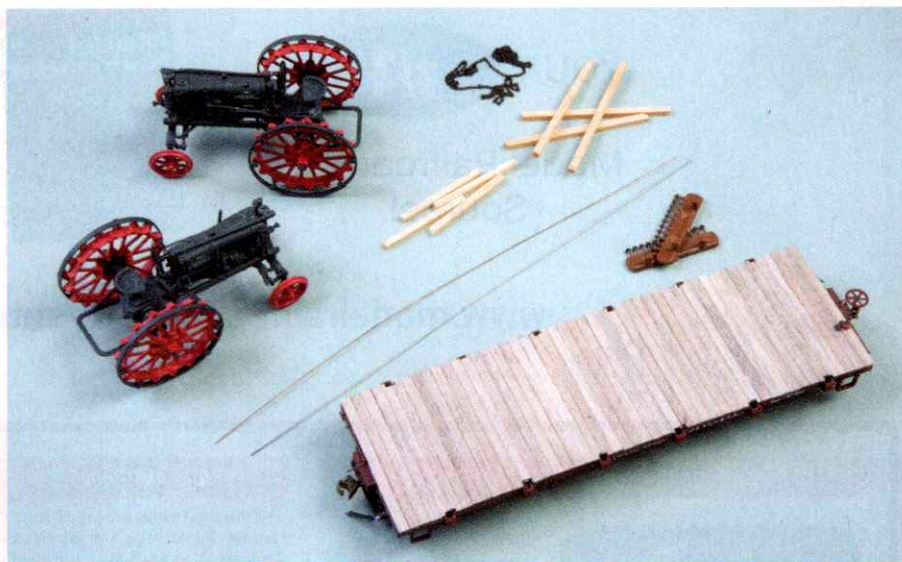
Sandy River & Rangeley Lakes engine no. 24 rolls into Strong with a flatcar bearing a load of two Farmall tractors. Lou Sassi created the load to be removable in case he later wants to repurpose the flatcar.

Farm equipment makes a visually interesting load for the On30 Sandy River

By Lou Sassi • Photos by the author

When I found an O scale McCormick Farmall model F-12 tractor (NGMC CV 630) on the Narrow Gauge Modeling Co. website (narrowgaugemodeling.com), I thought two of them would make an excellent load for one of my Sandy River & Rangeley Lakes RR's flatcars. Since I wanted the tractors to be removable in case I decided to repurpose the car, the wooden blocking for the wheels and the chains holding them onto the flatcar deck couldn't be permanently attached. The answer to this dilemma was to make both the blocking and tie-down chains removable.

All the parts needed for this project are shown in 1. They consist of a



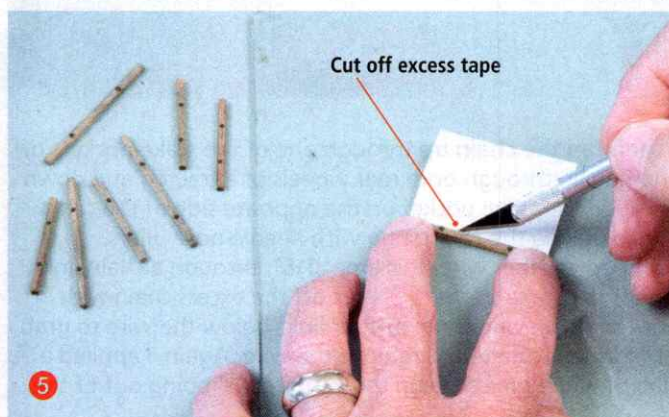
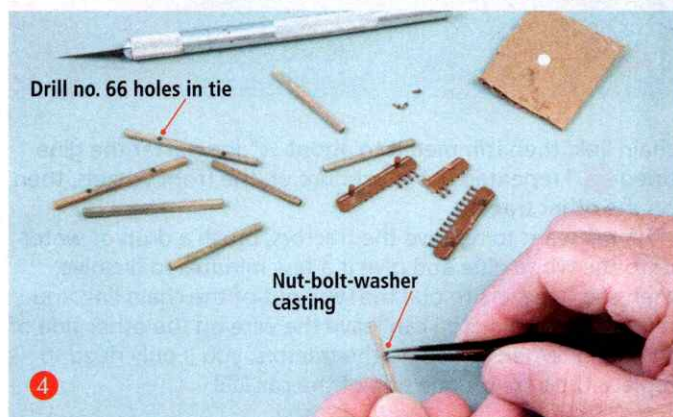
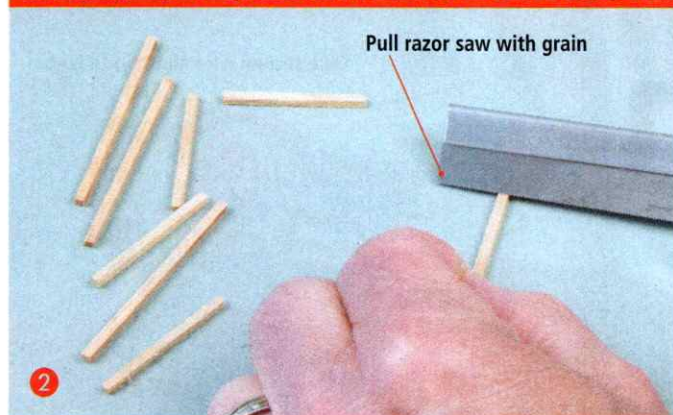
1 The parts needed for this project include (clockwise from bottom) the flatcar, .018" and .020" wire, two scale tractors, scale chain, wood railroad ties, and nut-bolt-washer castings.

Bachmann flatcar, tractors, black scale chain, eight HO scale trestle ties, .018" and .020" wire, and nut-bolt-washer (n.b.w.) castings. I opted to use two HO N3 wood trestle ties to block the front wheels and two extended ties for the rear

wheels of each tractor. I affixed them with double-sided tape so I could peel them off.

Follow along step by step as I turn these tractors into an interesting, removable flatcar load.

STEP 1 PREPARE THE BLOCKING



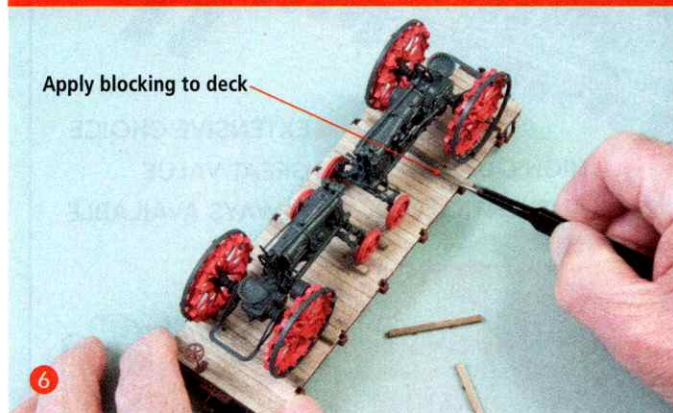
I began by distressing the ties by dragging a razor saw across the surface (2). After removing the burrs with 180 grit emery cloth, I brushed on a homemade stain of 1 teaspoon India ink in a pint of 70 percent isopropyl alcohol (3).

Next, I brush-painted some n.b.w. castings (Tichy Train Group no. 8144) with Model Master Railroad Tie Brown acrylic paint. I then drilled holes in the ties for the n.b.w. castings using a no. 66 drill bit in a pin vise and enlarged the opening slightly by twisting a no. 11 hobby knife blade in it. This last step lets you press the casting into the drilled hole

much easier. Using tweezers, I dipped the pins of the castings into a drop of white glue and pressed them into the holes (4). After all the n.b.w. castings were added, I flipped the ties over and trimmed off the part of the pins that protruded from the underside of the tie.

I pressed the tie onto the exposed sticky side of some double-sided carpet tape, then used a hobby knife on a glass cutting board to cut off the excess tape (5). This tape would allow me to stick the ties to the deck of the flatcar but remove them easily when necessary.

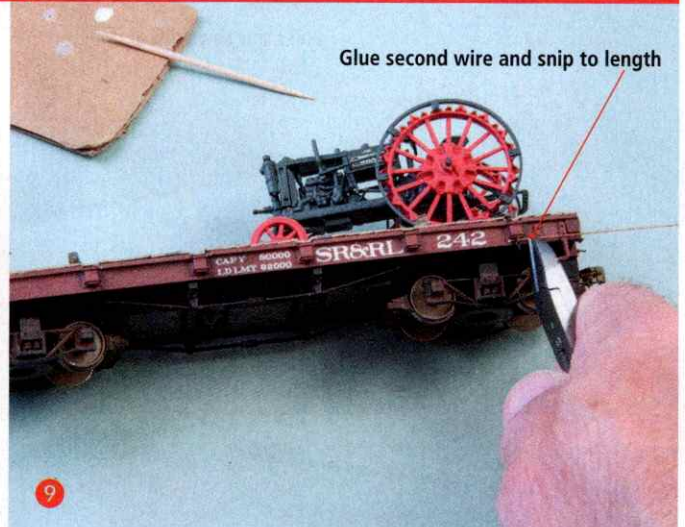
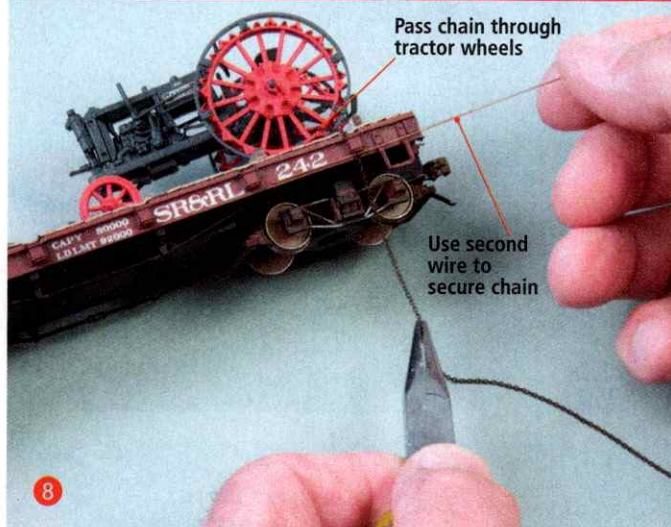
STEP 2 TIE THEM DOWN



After spraying both tractors with Testor's Dullcote, I placed them on the deck of the flatcar. I peeled the protective covering off the double-sided tape and placed the ties into position (6). I slid a length of .020" wire through the end link of

some 27-links-per-inch blackened scale chain (A-Line Products, no. 29220) (7). After applying just a tiny bit of white glue with a toothpick to hold it in place and letting that dry, I trimmed the wire to about 1/8" long.

STEP 2 TIE THEM DOWN (cont'd)



I then ran the chain up through one of the stake pockets of the flatcar, through both rear wheels of a tractor, and down through the stake pocket on the opposite side of the car. While pulling the chain snug with needle nose pliers, I slipped another wire, this time .018", through a chain link under the stake pocket **8**. I cut off the excess chain with wire snips, leaving three or four links below the wire to grab onto when I needed to remove the wire. Again, I applied a dab of white glue to keep the wire from slipping out of the

chain link, then trimmed it to about 1/8" long after the glue dried **9**. I repeated this procedure on the front wheels, then on the other tractor.

If you want to remove the tractors, brush a drop of water onto the white glue and give it a few minutes to dissolve, then use tweezers to pull the wire out of the chain link and remove the chain. You can leave the wire on the other side of the chain. When reloading the tractors, you'll only need to replace the wire on one side of the car. **MR**

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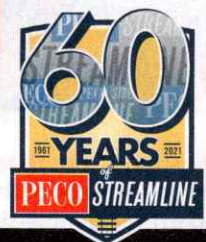


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Digitrax UT6D throttle and Peco Unifrogs



1 New utility throttle. The back of Digitrax's new UT6 throttle is contoured and comfortably fits in the palm of your hand or shirt pocket. You can operate the entire throttle with your thumb.

A throttle (cab) is the face to any Digital Command Control (DCC) system. So, ease of use is a driving factor for many modelers when selecting a system. Now that electronics are less expensive than when Digitrax started, the company took all the comments it had received over the years to heart and set out to make its new throttles easier to use. The new UT6 and UT6D (with duplex radio) **1** handily meets this objective.

If you're familiar with the DT602 (DCC Corner, Dec. 2020) or the Zephyr Express, you'll find that you can instantly use the UT6. If you're not, the only thing you need to know now is that the power key is the lower left

hand key and the quick start guide, if you need it, is on page 5 of the manual. Once it's powered up, you can be guided by the context-sensitive messages on the central display.

Digitrax tried hard to minimize the need to consult the manual. Even though it doesn't have all the same keys as the DT602, there's no doubt about which key you need to press. For example, the number keys, which control functions and turnouts, double as the soft menu keys.

The throttle is about 2.1" wide, 1.1" thick, and 4.1" long. The color display is 1.5" diagonal. With the BP600MH rechargeable battery pack installed, it weighs about 4.5 ounces. You can also use AA batteries.

Beneath the throttle knob, you'll find a locomotive key, a switch (turnout) key, and a menu key. It has the digits 0 through 9 for setting locomotive addresses, selecting turnouts, or acting as soft keys.

The F key is for selecting functions 10 through 28. Each time you press the F key, it cycles through a list of 0-9, 10-19, and 20-28. If instead you hold the F key down, it will display the last function group you used.

While holding it, you can press any number and activate that function. This should satisfy the people who are used to ready access to the functions 10-12, without the need for more buttons and a bigger throttle.

When you release the F key, it returns to the list of 0-9. Note that for quick access to the higher functions, it takes two fingers. This may be the only operation you can't do with one hand.

Though it's smaller than the DT602, you'll find this is a capable throttle. It can pretty much do everything the DT602 can do except program Configuration Variables (CVs). Configuration Variable programming was omitted by customer request. You can select locomotives, set up consists, operate locomotive functions, line turnouts, and control track power. Some layout owners don't want operators or visitors to control track power and turnouts, so these capabilities can be disabled.

On the top of the throttle is the direction switch, an infrared (IR) transmitter, and an IR receiver. The IR receiver looks like a recessed button. It's not a button. Resist the temptation to push it, as you could damage it.

Like any liquid-crystal display (LCD), it looks different at an angle than it does

straight on, so gray text may appear black. Be sure you're looking at it straight on, or you may be misguided about what it's telling you.

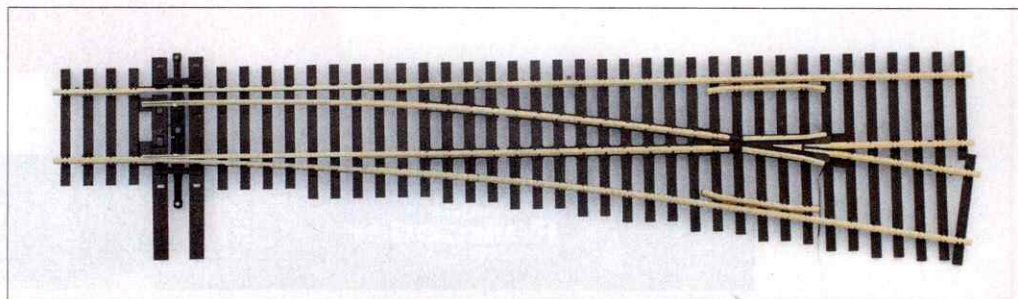
A few keys are worth mentioning. The F key, besides accessing functions, acts like an enter key when setting up a consist. Follow the context-sensitive help messages and you'll be fine.

The X key is not only used to stop trains, it's also a back key that will take you to the main "home operations screen." Use it whenever you're done doing something or are lost and need to get back to the beginning.

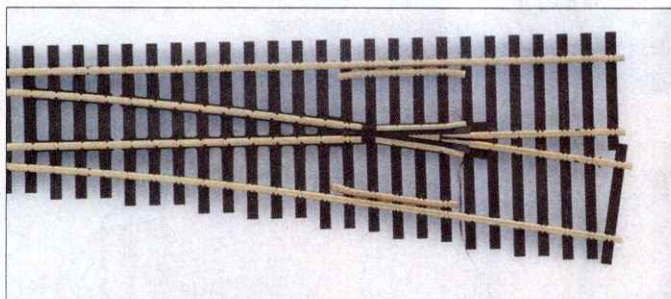
The power key is similar to that on the DT602 throttle. To access the track power and throttle power menu, don't press the key in the middle. Press the lower half of the key and you'll find the menu you are after.

You can charge the NiMH battery using a DC wall transformer or charge it over LocoNet if you put your command station into sleep mode. To initiate charging, you need to press the power key and then select the charge function from the context-sensitive menu.

The UT6D worked well with my UR92 duplex radio receiver. The UT6D has an improved transceiver and



2 Frog options. The HO scale code 83 no. 6 Unifrog turnout from Peco replaces the former Electrofrog and Insulfrog options. Note that there are no hinges between the point and closure rails. Internal jumpers connect the stock rails, closure rails, and frog rails, as shown in **4**.



3 Getting close. While the closure rails necessarily get close together on an unpowered frog turnout, it appears Peco has minimized the danger of wheels shorting at the frog. The point of the frog that can be optionally powered is only about $\frac{3}{8}$ " in length – about the spacing of two ties.

antenna system that will double the range. I also verified it would work tethered with a LocoNet cable directly to a Zephyr Express DCS52.

The UT6 is a DT602 mini. As such, you may find that you only need one DT602 to set CVs. You may find that most, if not all, your other throttles can be UT6s. Enjoy your new throttle!

Peco's Unifrog turnouts

A few years ago, Peco introduced the Unifrog turnout, **2**. The Unifrog is the successor to its popular Insulfrog and Electrofrog turnouts. Peco is phasing in Unifrog turnouts as tooling for the Insulfrog and Electrofrog turnouts wears out.

While a turnout isn't a DCC product *per se*, longtime

readers of my website know I found turnouts were a common source of shorts that could shut down an entire DCC system. I coined the phrase "DCC friendly" for turnouts that were engineered to minimize the problem. This idea gained traction in the marketplace, and now several manufacturers market DCC-friendly turnouts.

Another problem I found was modelers didn't know how to wire turnouts. I have detailed descriptions on how to wire them on my website.

In fall 2020, I found no. 6 HO code 83 Unifrog turnouts for sale. While the full line of Peco turnouts isn't yet available as Unifrogs, the no. 6 in code 83 and code 55 fill many needs and are worthy of discussion. The other code 83

products available as Unifrogs are a crossing and a double-slip turnout. Peco tells me the code 70 no. 6 is next, followed by the code 83 no. 8. Later this year, the code 70 no. 8 should arrive.

The Unifrog is a melding of the best of the Insulfrog and the Electrofrog turnouts. You can use it as you would either an Insulfrog or an Electrofrog. If you opt not to power its small frog, you're only leaving about a $\frac{3}{8}$ "-long area unpowered on the code 83 Unifrog **3**. If you want to power it, you can **4**; Peco has even attached a wire to the frog for your convenience. You don't have to risk applying heat to the frog and knocking it out of alignment as the plastic softens.

Peco didn't stop there. It connected the stock rails to the closure rails for you. Finally, and perhaps the best for last, the closure rail and point rails on the code 83 no. 6 are all one piece – no hinges! The N-scale medium Unifrog turnout still has a hinge for the point rails.



WHILE A
TURNOUT ISN'T
A DCC PRODUCT
PER SE, LONG-
TIME READERS
OF MY WEBSITE
KNOW I FOUND
TURNOUTS
WERE A
COMMON
SOURCE OF
SHORTS.
— ALLAN

Should you rip out your Insulfrogs and Electrofrogs? No, they're still good turnouts. As you expand your layout, buy the latest addition to the world of DCC friendly turnouts, the Unifrog. Ribbit! **MR**

Q&A

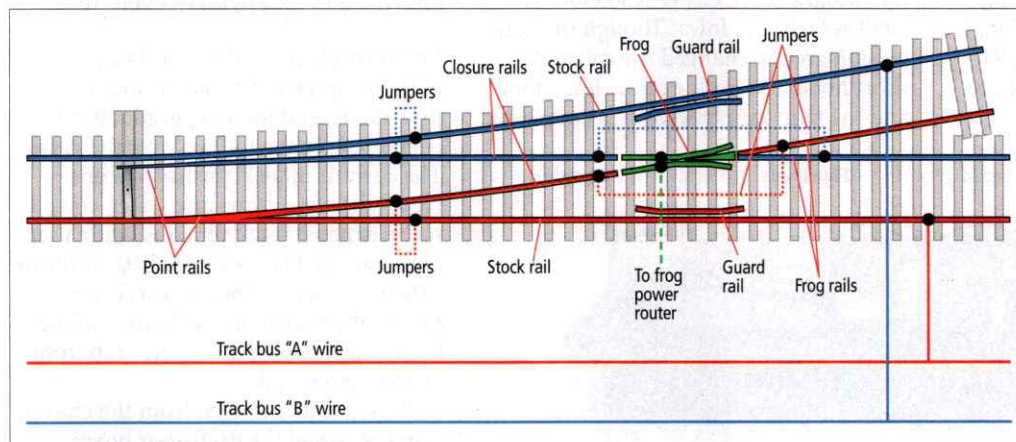
Q I'm building a reasonably large HO scale layout that will be using NCE Power Pros

for two booster districts and PSX circuit breakers for the power districts. The boosters will be somewhat centrally located on the layout, with the longest run to a power district being about 30 to 40 feet. The power bus will be 12 AWG with 16 AWG for the sub-bus in each district. From a best practices viewpoint, should the breakers be near the boosters or should they be distributed so they're closer to the district each will control?

Bob Gifford
Hamilton, VA

A You can do either as long as your wiring is heavy enough and the circuit breaker reliably passes the quarter test at all points. From a practical standpoint, you might like having your circuit breaker closer to the district it controls so that you can see its indicator light.

You might want to look at the NCE EB1 circuit breaker. It's a little smaller than the PSX. Both the EB1 and PSX have indicator lights and provide for an external indicator. If you went with the external indicator, you could centrally locate your circuit breaker and run the external indicator closer to the district it controls.



4 Hot frogs. Both the HO and N scale Unifrog wire up the same way. Connect each of your track bus wires to the corresponding stock rail, power the frog if you want to, and you're done. You don't even have to use insulated joiners on the frog rails.



Atlas Classic HO scale Alco RSD-5 diesel

Atlas Model Railroad Co. has released a new run of HO scale Alco RSD-5 diesel locomotives in its Classic line. The six-axle road switcher features a dual-mode ESU LokSound decoder, improved tooling on the turbo exhaust stack (air- and water-cooled versions), and factory-installed and painted wire grab irons.

The prototype. Alco produced the RSD-5 from March 1952 through March 1956. During that time, 204 units were built. The bulk of the production run – 167 units – went to railroads in the United States: Atchison, Topeka & Santa Fe; Birmingham Southern; Chesapeake & Ohio; Chicago & North Western; Central of New Jersey; Milwaukee Road; Pennsylvania RR; Southern Pacific; St. Louis Southwestern (Cotton Belt); Texas & New Orleans; and Utah Ry. National Railways of Mexico (2) and Pacific RR (35) were the two non-U.S. railroads to roster the RSD-5.

Our sample is decorated as Chicago & North Western no. 1665, one of 10 RSD-5s rostered by the granger road. Units 1665 through 1667 were built in September 1953.

The remaining seven locomotives (1684 to 1690) were built in March and April 1954. Of the second batch, five (1686 through 1690) had high short hoods that housed a steam generator and dynamic brakes (the latter in units 1686 through 1688 only). The unusual appearance of the high-short-hood on the five C&NW RSD-5s earned them the nickname “hammerheads.”

The majority of C&NW’s RSD-5s were retired between July 1977 and March 1981 (no. 1687 was wrecked and scrapped in 1968). The 1684 was rebuilt into a snow plow, CNW X263000, in 1980 at Oelwein, Iowa. Though the conversion greatly changed the cab and short hood, the profile of the long hood and the trimount trucks are a couple of

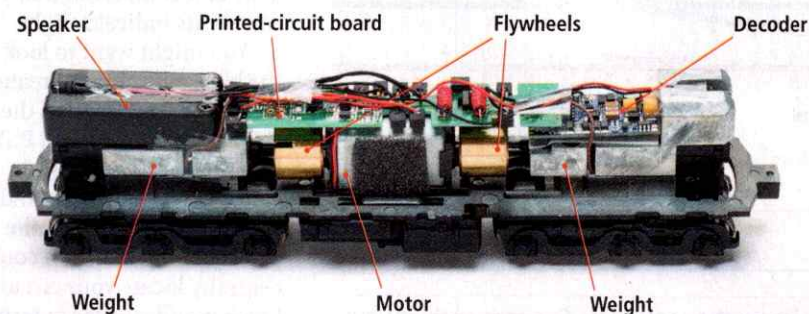
indicators of the plow’s RSD-5 heritage. The plow was retired by Union Pacific after it acquired the C&NW in 1995. Today the plow is part of the collection at the Boone (Iowa) Scenic Valley RR.

Number 1689 served on commercial railroads and tourist lines in Wisconsin, Maryland, and Ohio since its retirement in 1981. The locomotive, painted in C&NW colors, is currently part of the operating fleet of diesels at the Illinois Railway Museum in Union.

For a thorough history of prototype locomotives, check out Paul K. Withers article “Alco’s RSD-4 and RSD-5: The ‘Sure-Footed’ Road Switcher” in the March/April 1998 issue of *Diesel Era* magazine. In addition to historical information, the story also includes prototype photos and an equipment diagram.

The model. The RSD-5 has been a part of the Atlas product lineup since the mid-1980s, and many upgrades have been made to the tooling over the years. The current model consists of a one-piece sill; a body (air- and water-cooled turbo exhaust stack versions) with a separate cab; and factory-installed air horns, exhaust stack, and brake wheel. The handrails, stanchions, and uncoupling levers are flexible plastic; the grab irons are painted metal.

To separate the shell from the chassis, I first removed the draft-gear boxes. Then I disengaged the tabs on the body (one in each corner) that lock into nubs on the metal chassis. I gently wiggled the



With the shell removed, you can see how the motor, printed-circuit board, decoder, and speaker fit on the die-cast metal chassis. The decoder is under the cab.

shell, being careful to not damage the handrails, until it slid off the chassis.

Above the fuel tank is a five-pole skewed armature motor flanked by brass flywheels, as shown in the bottom photo on the opposite page. A printed-circuit board spans the motor and flywheels. The ESU LokSound decoder is above the rear truck; a downward-facing speaker is located over the front truck. Screw-mounted metal weights are located over both trucks. Light-emitting diodes are used to illuminate the twin-beam headlights at each end.

Measuring up. The Atlas Alco RSD-5 is equipped with Accumate knuckle couplers, mounted at the correct height. The blackened metal wheels are properly gauged. The six-axle unit tips the scales at 10.1 ounces.

I compared the model to prototype drawings in *Chicago and North Western Power: Modern Steam and Diesel 1900 to 1971* by Patrick C. Dorin (Superior Publishing Co., 1972). The major dimensions match published data. The distance over the couplers is a scale 1'-6" long, which is typical, as model couplers are slightly oversized.

The yellow and green paint was smooth and evenly applied, and the separation lines between colors were crisp. The three-color CHICAGO AND NORTH WESTERN RAILWAY ball-and-bar herald on the cab sides was correctly registered. I was really impressed by how opaque the yellow reporting marks and road numbers were on the dark green sides and ends. Making yellow pop over a dark color is no easy task.

There were a few detail discrepancies between the model and the prototype. The full-size 1665 had vertical Pyle National twin sealed-beam headlights, a multi-chime air horn on the long hood end of the cab, a mix of tall and short long hood doors, square screens instead of louvers on the long hood, and a Champion brake wheel.

The details on the model's shell more closely match those found on units operated by the Chesapeake & Ohio and Pennsylvania RR. Both of those road names were offered in previous releases.

To the test track. The Atlas RSD-5 features a dual-mode ESU LokSound sound decoder, so I tested the model in both environments.

PERFORMANCE CHARTS

DRAWBAR PULL	2.6 ounces
	36 freight cars on straight, level track
SCALE SPEED (DC)	
VOLTS	SCALE MPH
8.4	sounds on
10.2	3.1
11	16
12	42
SCALE SPEED (DCC)	
SPEED STEP	SCALE MPH
1	2.5
7	20
14	53
21	98
28	123

For the direct-current test, I used a Bachmann power pack. The sounds came on at 8.4V. This is typical of sound-equipped units on DC. The model started moving at 3.1 scale mph at 10.2V and achieved a top speed of 42 scale mph at 12V.

For the Digital Command Control (DCC) testing, I used an NCE PowerCab. From the box, I couldn't get the model to move at speed step 1 of 28. Adjusting configuration variable (CV) 2 to 5 resolved the issue. At step 1 the road switcher crawled along at 2.5 scale mph. At step 28, the model hit a top speed of 123 scale mph.

I was unable to locate a top speed for the full-size RSD-5, but the RSD-4 had a top speed of 65 mph. The speed range can be fine-tuned using CVs as spelled out in the ESU user manual, available as a free download from loksound.com.

I then took the RSD-5 over to our Milwaukee, Racine & Troy staff layout to put the six-axle road locomotive through its paces. The engine navigated the model railroad's 36" radius curves and no. 6 turnouts without incident.

With a drawbar pull of 2.56 ounces, the RSD-5 should be able to pull 36 free-rolling freight cars on straight and level track. To see what the locomotive could pull up a grade, I assembled an east-bound train at Bay Junction. The six-axle unit hauled eight 50-foot freight cars up the 3 percent grade without slipping.

An oldie but goodie. The Alco RSD-5 has been part of the Atlas HO scale diesel lineup for more than 35 years. Continuous upgrades to the shell and mechanism, as well as the addition of a sound decoder, have kept this veteran road switcher as relevant as ever. — *Cody Grivno, group technical editor*

Facts & features

Price: \$164.95 (direct current with 8-pin socket for Digital Command Control decoder); \$274.95 (with dual-mode ESU LokSound decoder)

Manufacturer

Atlas Model Railroad Co.
378 Florence Ave.
Hillside, NJ 07205
atlasrr.com

Era: March 1953 through 1981 (as decorated)

Road names: Chicago & North Western; Atchison, Topeka & Santa Fe (pinstripe scheme); and Southern Pacific ("black widow"). Two road numbers per scheme. Also available undecorated (water- and air-cooled exhaust versions).

Features

- Blackened metal wheels, in gauge
- Body-mounted Accumate couplers, at correct height
- Factory-installed and painted wire grab irons
- Plastic handrails and stanchions
- Weight: 10.1 ounces



Upgrades to the RSD-5 include a new water-cooled turbo exhaust stack and painted wire grab irons.

Kitwood Hill Models 36-foot On30 turntable

Steam-era operation typically requires additional infrastructure items, such as coaling towers and water cranes, but perhaps the most interesting of these is the turntable, used for turning locomotives and sending them back out in the opposite direction.

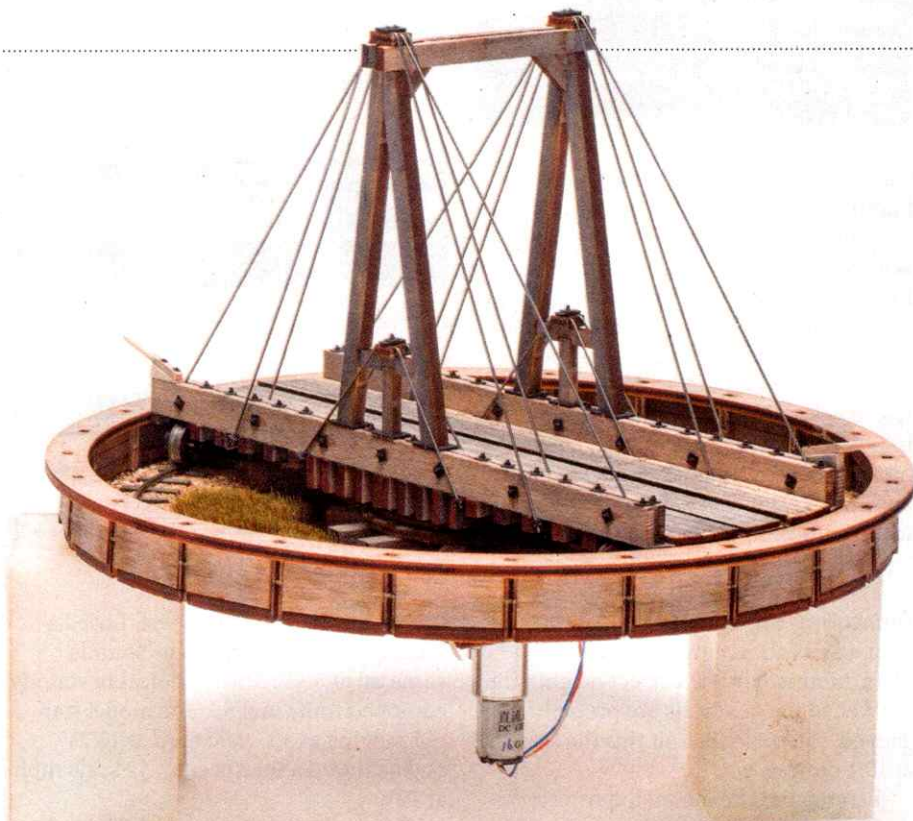
Kitwood Hill Models offers several laser-cut wood kits for gallows-style narrow-gauge turntables in an assortment of lengths, all based on the design of the turntable at Laws, Calif. Needing a turntable for my most recent On30 (On2½) layout project, I purchased the firm's small 36-foot table and built it.

Fantastic fit and finish. I was pleasantly surprised by the ease of assembly of the Kitwood Hills product. The laser-cut parts were all cleanly rendered in various thicknesses of basswood and micro plywood. Tab-and-slot construction is used throughout, and the kit includes a number of steel locator pins, temporarily inserted into various parts to keep pieces aligned perfectly during assembly.

The pins were especially helpful when constructing the turntable pit where the walls and rim need to be perfectly spaced from the center. You could use thin cyanoacrylate adhesive (CA) throughout for assembly of the parts. However, I used yellow carpenter's glue in a lot of the wood construction steps, as I prefer its bonding and working characteristics.

The kit uses an ingenious technique to get the pit rail installed correctly. The kit comes with two plywood circles that form a jig for soldering the rail to printed-circuit (PC) board ties. After gluing the ties on their laser-etched marks around the pit floor, I placed the smaller circle on its two temporary steel locator pins. Next, I wrapped the length of pit rail along the circle's outer edge, then pressed the larger plywood circle over the rail, which locked it into place.

The larger plywood piece has a notch in it, allowing you to solder the rail to the PC ties one at a time by simply shifting the notch to the next position. Once the jig is removed, the pit rail forms a true



circle and aligns perfectly with the kit's precision-milled turntable bridge wheels.

A few modifications. The model comes with nut-bolt-washer kits that you assemble one at a time from laser-cut parts and wire. Looking to speed up the project, I bought Tichy Train Group plastic O scale 4" and 6" square washer castings to substitute for the kit parts. The kit calls for about 70 castings, and by looking at photos of the Laws, Calif., turntable, I can see that I could use more yet.

The Kitwood Hill turntable came with a 3-volt motor and reduction gear, but leaves control up to the modeler. One option would be to connect the motor to a Digital Command Control (DCC) motor decoder wired directly to the track power bus. By assigning the turntable an address, you could drive the motor using the throttles on your layout's DCC system.

However, I wanted traditional fascia-mounted controls, so I purchased a 3-volt power supply and a double-pole double-throw (DPDT) center-off momentary contact switch. I wired the DPDT switch for reversing operation. I was impressed with how smoothly and quietly the motor and drive work.

While I was at it, I also installed a Tam Valley Depot DCC auto-reverser for the powered bridge track. This way I don't have to remember whether the polarity on the bridge rails is correct or reversed; the auto-reverse takes care of that.

Before installing the bridge, I added scenery to the floor of my turntable pit. In addition to gravel and dirt, I added static grass clumps to give it a good dose of backwoods flavor to match my layout.

The model took me a couple of weeks of off-and-on building sessions to complete, and was an enjoyable project from start to finish. Its compact 9" diameter footprint, coupled with the fact that you can order it from the manufacturer for either On30 or On3, makes it a good choice for any O scale narrow gauge layout with very small locomotives. — David Popp, *Trains.com* executive producer

Facts & features

Price: \$94.00 (varies due to exchange rate)

Manufacturer

Kitwood Hill Models
59 Highfield Ave.
Aldershot, Hants, GU11 3DA
United Kingdom
kitwoodhillmodels.com

Era: 1860s to early 1900s

Features:

- Wood and metal construction
- Easy assembly with detailed instruction booklet
- 3-volt motor and factory-assembled reduction gear
- Options for 30" or 36" narrow gauge

Athearn Genesis HO scale Union Pacific CA-8 caboose

Athearn has added several new cabooses based on International Car Co. prototypes to its HO scale Genesis line, including a Union Pacific class CA-8 steel car. The model features numerous prototype-specific details, positionable cupola windows, and factory-installed and painted wire grab irons. Athearn offers the car with a dual-mode NCE light decoder and a SoundTraxx Tsunami SoundCar with a variety of sound and light effects.

The prototype. Our sample is decorated as Union Pacific no. 25520, part of the railroad's 25500 through 25599 series of CA-8 cars. The cabooses were built between June and December 1964.

In *Cabooses of the Union Pacific Railroad* by Don Strack and James L. Ehernberger (Union Pacific Historical Society, 2002), it states, "All 100 CA-8s

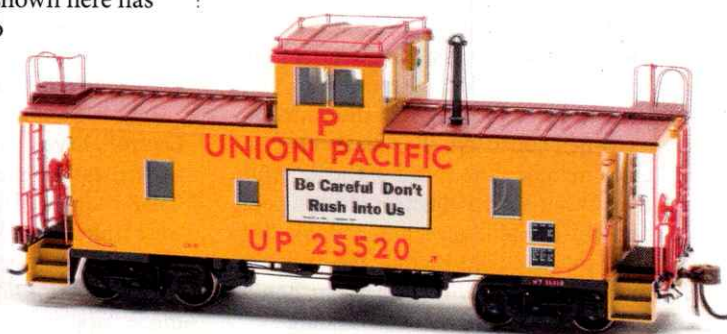
were upgraded in 1969 to include all features required of cabooses in system-wide pool service, such as radios, axle generators, interior and exterior lighting, and water-hopper toilets."

The model. Athearn offers the CA-8 caboose in two styles. The 1964 as-delivered model has separate safety slogan boards and plain cupola ends. The mid-1970s version shown here has safety slogans applied to the carbody and marker light boxes on the cupola ends. The UP caboose also includes modeler-installed Automatic Car Identification (ACI) placards.

An exploded-view diagram shows the

model's construction. The caboose has a one-piece injection-molded plastic body with a separate cupola. The cupola has positionable side windows, wind deflectors, and wire grab irons on the roof. Other rooftop features include a separate smokejack with wire braces, etched-metal running boards, and a toilet vent.

The caboose ends are well detailed, with see-through end platforms and steps; wire grab irons; and plastic end cages with a separate brake wheel, brake rod, and chain. Wire grab irons and a plastic air hose and pipe can also be found on each end.



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Though the inside of the model can be illuminated, the interior detail is spare. There are four seats, two in the cupola and one on each end. The rest of the interior is filled by the speaker and its related gasket and cap, a ceiling insert, and a printed-circuit board.

Lights and sounds. Our caboose has a SoundTraxx Tsunami SoundCar decoder. You can consist the SoundCar-equipped caboose using advanced or intelligent consist. I chose the latter.

I started by passing a magnet over the caboose. Once I heard the hand brake being released, I had one minute to enter the locomotive (or consist) address. After I entered the address, I pressed F8 four times. The air bleed-off sound effect confirmed the caboose was in the consist.

When consisted, the wheel clickety-clack matched the speed of the locomotive. Other sound effects include a peanut whistle, generator, and coupler clank.

Lighting effects include red and green marker lights and interior lights. For more information on the sound and

lighting effects, download the free SoundTraxx SoundCar Users Guide online at soundtraxx.com.

To remove the caboose from the consist, I passed the magnet over the model until I heard the ratcheting sound of the hand brake being set.

By the numbers. The UP CA-8 caboose weighs 3.7 ounces, which is .2 ounce too heavy based on National Model Railroad Association Recommended Practice 20.1. The Athearn Genesis model closely matches prototype drawings in the previously cited UP caboose book. The model rides on well-detailed General Steel Castings outside swing hanger roller-bearing trucks. The right side of the A-end truck has an axle generator.

Overall, I was quite impressed with the Athearn Genesis HO scale UP CA-8 caboose. The exterior details were impressive, living up to Athearn's "better than brass detail" slogan.

The interior left me wanting a bit more, especially since it's illuminated.

Facts & features

Price: \$109.98 (NCE dual-mode light decoder), \$149.98 (SoundTraxx SoundCar)

Manufacturer

Athearn Trains
1600 Forbes Way, Ste. 100
Long Beach, CA 90810
athearn.com

Era: Mid-1970s to May 25, 1989

Road names: Union Pacific (mid-1960s+ and mid-1970s+), four numbers each.

Features

- 33" machined metal wheels on half axles, in gauge
- McHenry scale couplers, at correct height

I understand why the details had to be omitted, though.

The sound and light effects are where the model really shines. Displaying the correct marker aspect and activating the peanut whistle will appeal to operation-oriented modelers. — *Cody Grivno*

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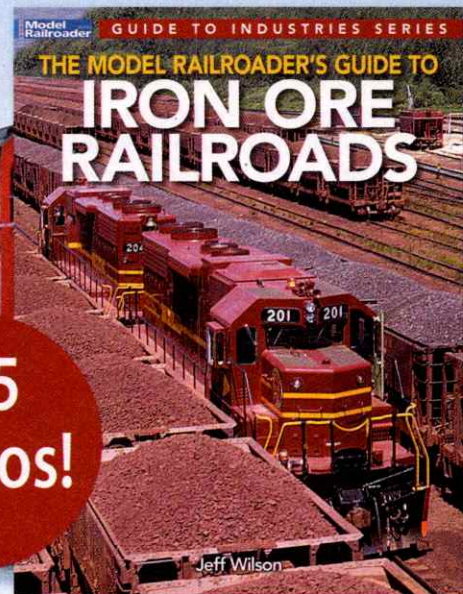
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The ritual of train registers

Many of my recent "On Operation" columns describe the concept of authority for main track train movements. Timetable-and-train-order (TTTO) authority relies on schedules and train orders. However, authority remains subject to superiority.

Rule 83 makes this clear: "A train must not leave its initial station on any division, or subdivision, or a junction, or from one of two or more tracks to single track, until it has been ascertained whether all trains due, which are superior, have arrived or left. Stations at which train registers are located will be designated by timetable." Rulebooks have rested on this principle ever since the Standard Code first took form in the 19th century.

Well, okay, how was the arrival and departure of superior trains ascertained?

A train register is a written record of train movements kept at places designated in the employee timetable. Entries included the date, schedule and engine numbers, names of conductor and engineer, signals carried, and arrival and departure times. Division points were typical locations, because crews wouldn't have seen the arrival or departure of superior trains hours before they came on duty. Schedules held effect for 12 hours, so it wasn't enough to assume that an opposing train arrived on schedule. In other words, a train due to arrive at 6 a.m. could pull in as late as 5:59 p.m.

without losing its schedule and thus its authority.

Junctions were often designated register locations, too. Here's an example. Envision a division extending from station A to station F, both division points. Station D is a junction at which a busy branch joins the main line. Train No. 202, a regular second-class train due to come off the branch at 11:15 a.m., knows it can't proceed east to F before first-class No. 1, scheduled to depart D at 10 a.m., passes westbound.

However, No. 202 was switching a lumberyard 10 miles away at 10 a.m. How does its crew know whether No. 1 has departed? The railroad's employee timetable says a train register is kept at D. It records that No. 1 departed at 10:30 a.m. with no signals, such as green flags, displayed on the front of the engine.

Train No. 202's conductor inspects the register and sees that all other superior trains due within the last 12 hours have also passed. He swings a highball; No. 202 whistles off and departs.

Suppose that No. 202's conductor checks the register and finds all in order as above, except that No. 1 left displaying green signals. Can No. 202 proceed? No. Green signals indicate that No. 1 is running in sections. [See the "On Operation" column of February 2018.] Two or more trains are using No. 1's schedule, so No. 202 must wait until the register records or its crew observes



A New Jersey Transit conductor registered his train's arrival at Woodbine, N.Y., a small storage yard where New York City commuter trains laid over between the evening and morning rush hours. Photo from Jeff Kovacs collection

No. 1's last section pass, bearing no signals.

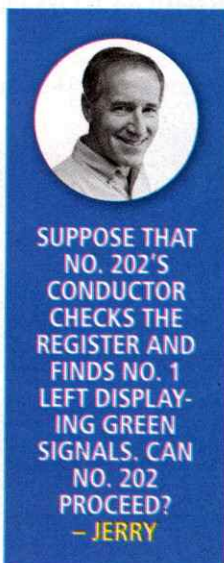
Rule 83 requires this practice of every train, whether a regular train or an extra train. We've seen how No. 202's movements at D are affected. Let's examine Extra 2472 East, working east from B on the branch under an order reading "ENG 2472 RUN EXTRA B TO F." It arrives at D at 11:45 a.m. This order's authority between D and F remains subject to superiority. The extra can't move west from D until the register shows or its crew observes that No. 1 and all other superior trains have passed.

The photo shows a New Jersey Transit conductor registering his train's arrival. It's undated but it's thought to be from the mid-1980s. Typically, a conductor made his own train's record and checked the register for other trains' entries. At junctions and other designated

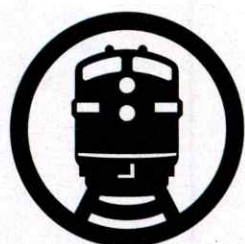
locations, an operator had the duty to make entries. In the third edition of his TTTO bible *Rights of Trains*, Peter Josserand pronounced: "Operators must register trains before reporting them to the dispatcher, being careful to report whether or not signals were displayed."

Train registers have a place in TTTO operation on a layout, too. A furtive glance around the room may tell a crew that a superior train has arrived, but checking the register is more disciplined. One owner I know uses hard-cover registers, similar in appearance to the prototype, that he himself binds. However, a small composition book can serve the purpose. I use clipboards for mine, supplied with copy paper printed with a form I created in a Word document.

Make registering a ritual as time-honored as a conductor comparing watches with his engineer. **MR**



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REGISTER AND
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LEFT DISPLAY-
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SIGNALS. CAN
NO. 202
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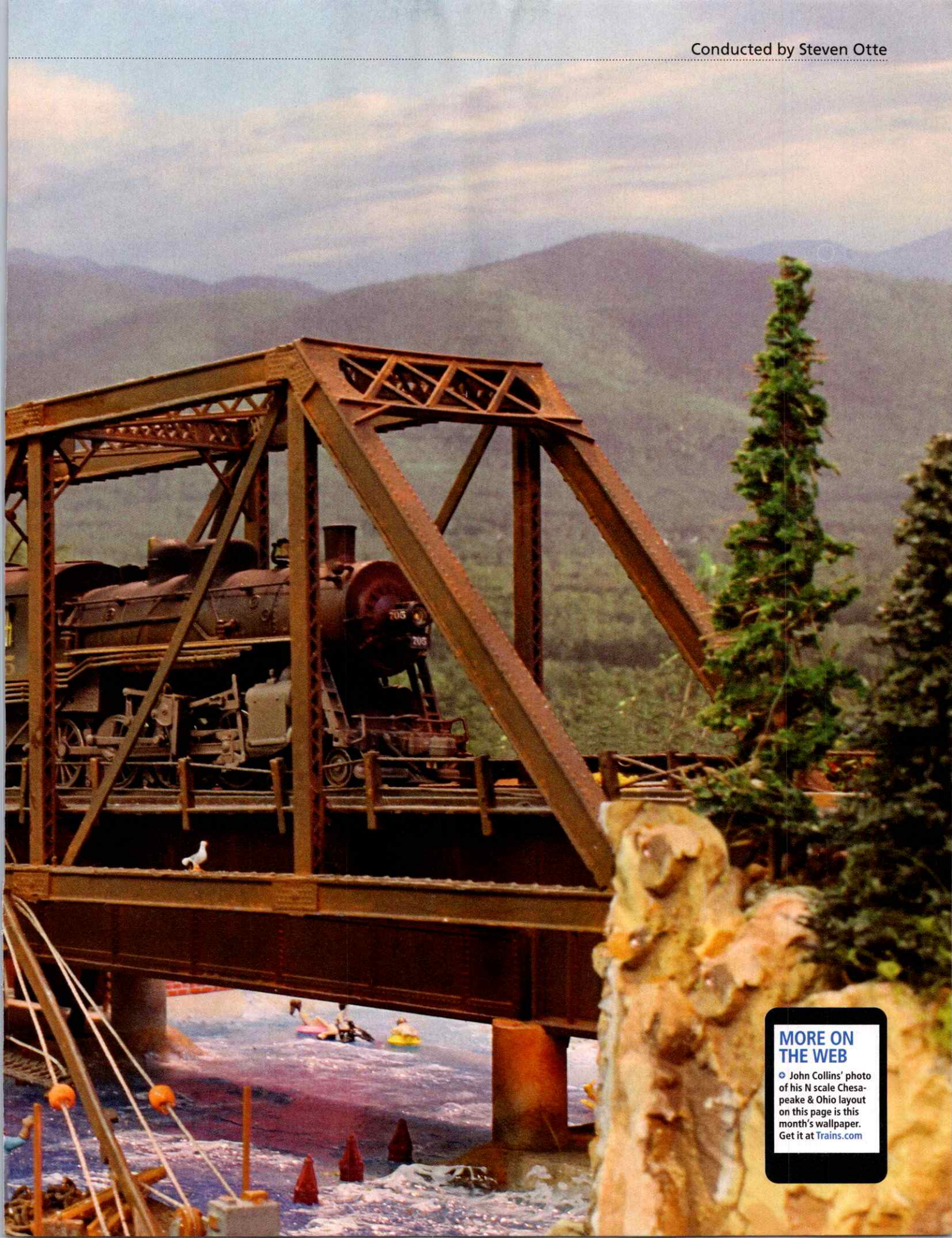
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Trackside Photos

Chesapeake & Ohio no. 705, a Baldwin 2-8-0 Consolidation, pulls a log train over the bay inlet while workers perform some maintenance on the steel truss bridge. John Collins of Hartland, Wis., photographed the scene on his N scale layout. The locomotive is a DCC-equipped Bachmann Spectrum model; the fishing clipper is a Model Tech Studios kit. John built the lighthouse from an RS Laser kit and installed an Evan Designs flashing beacon.





**MORE ON
THE WEB**

© John Collins' photo of his N scale Chesapeake & Ohio layout on this page is this month's wallpaper. Get it at Trains.com



Vacationers enjoy paddling their canoe on the still waters of Donner Lake while above their cabin, the westbound way freight climbs the grade toward Donner Summit. Ken Harstine of Holyoke, Mass., shot the tranquil scene along his N scale Southern Pacific main line, then used Affinity photo software to improve the depth of field. The Electro-Motive Division E7 locomotives are InterMountain models. Ken casts his rocks in a mix of Hydrocal and graphite powder for a marbled appearance.

Send us your photos

Trackside Photos is a showcase for the work of *Model Railroader* readers. Send your photos (digital images 5 megapixels or larger) to: *Model Railroader*, Trackside Photos, P.O. Box 1612, Waukesha, WI 53187-1612; or upload them to <http://fileupload.kalmbach.com/contribute>. For our photo submission guidelines, contact associate editor Steven Otte at sotte@mrmmag.com.



East Tennessee & Western North

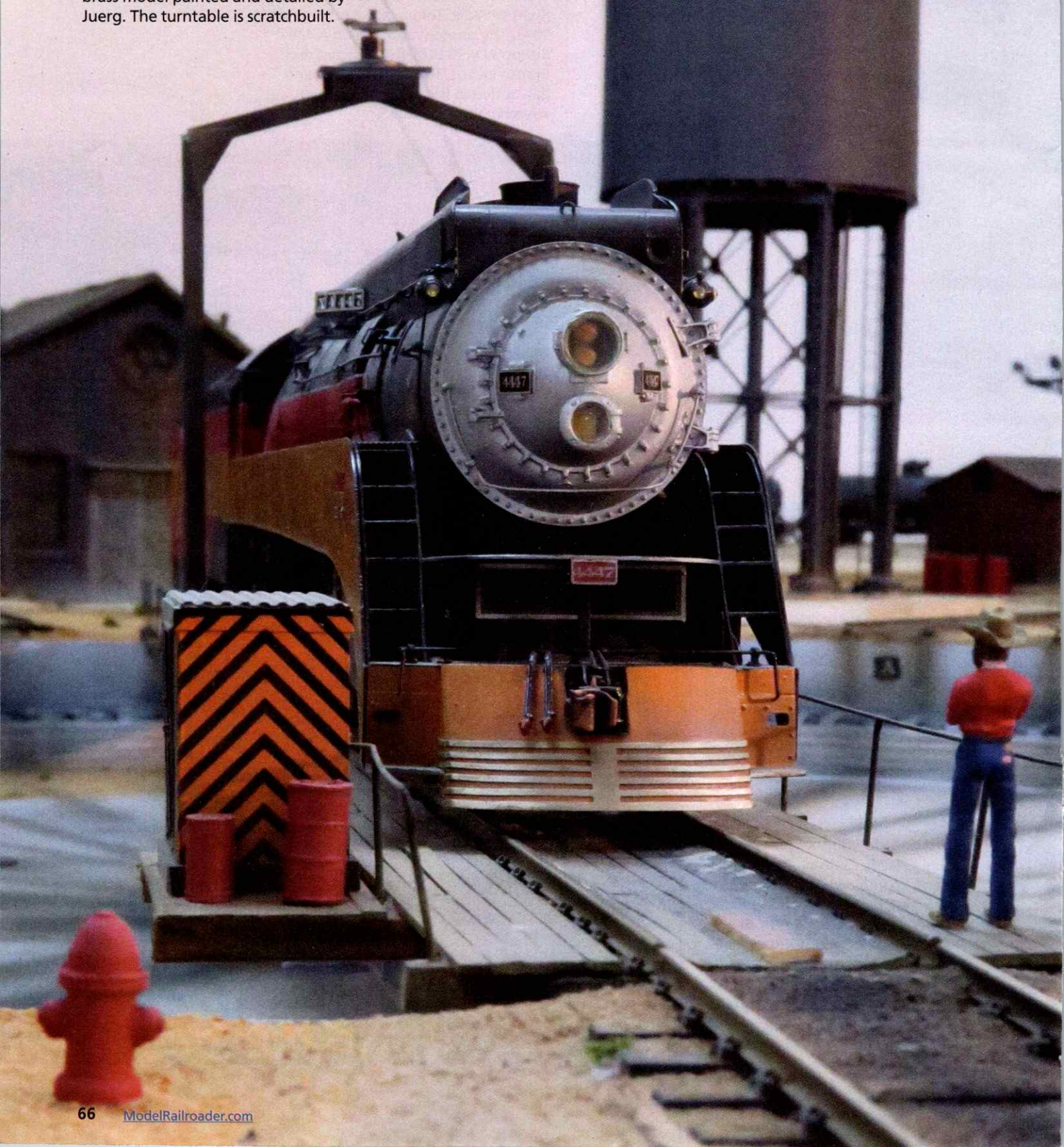
Carolina ("Tweetsie") no. 11, a Baldwin 4-6-0 Ten-Wheeler, crosses Stoney Creek Road at Sadie, Tenn., in the summer of 1943. The photo was taken on Ashley Bishop's On30 ET&WNC Stoney Creek Branch layout. The country store and gas station in the background was scratchbuilt. Lee Bishop photo



On a crisp fall day, a Monon local freight heads south past Westfield on its way to Indianapolis. Jim Matuszak of Traverse City, Mich., models the Monon's 2nd Subdivision from Indianapolis to Delphi, Ind., in the steam-to-diesel transition era of the 1950s. His 16 x 35-foot HO scale layout features a functional signal system. The Electro-Motive Division BL2 locomotive is a Broadway Limited model. Scarlett Piedmonte photo



Southern Pacific class GS-4 no. 4447, wearing iconic *Daylight* colors, rides the turntable at Taylor in preparation for its duties pulling a streamlined passenger train. Juerg Luetscher of Wallisellen, Switzerland, photographed the scene on his O scale SP layout, *The Orange Empire*. The locomotive is an Overland brass model painted and detailed by Juerg. The turntable is scratchbuilt.

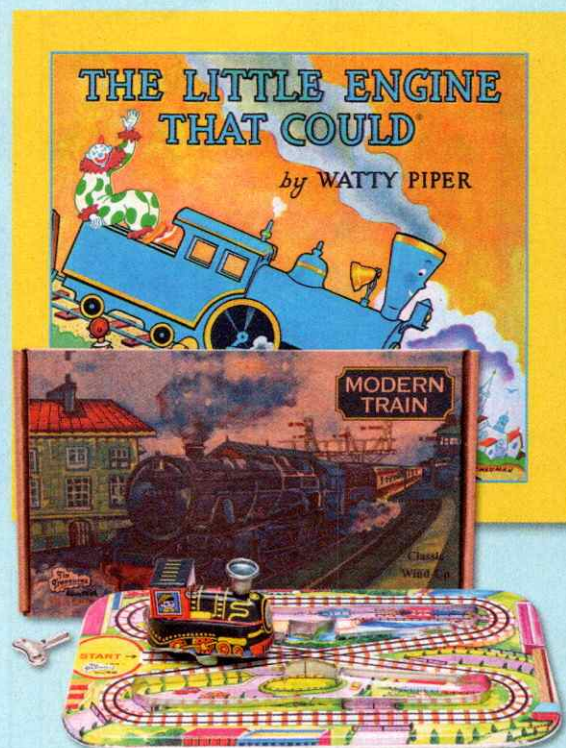
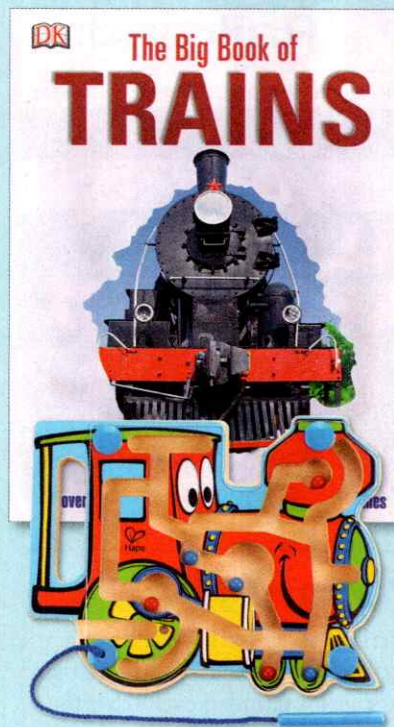
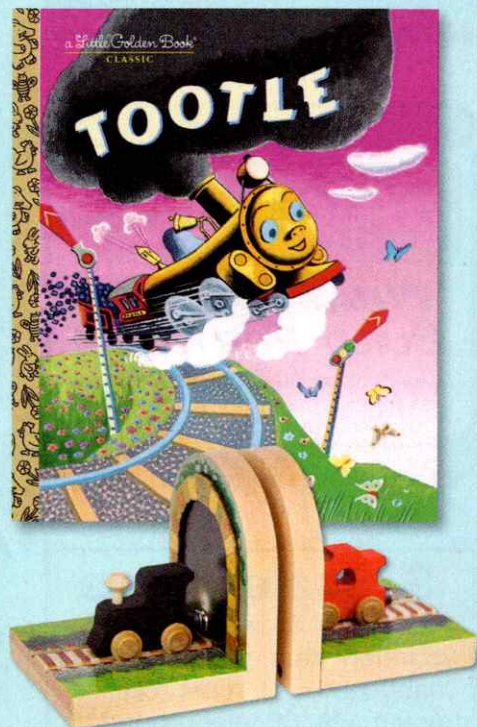


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Schedule of Events

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GA, CARTERSVILLE: The Piedmont Division Model Train Show. Clarence Brown Conference Center, 5450 Hwy 20, Cartersville, GA. March 13th 10-5 & March 14th 10-4. Admission: \$9 for adults, kids 9 and under are FREE. NMRA 2-Day Event, Free Parking, 150 vendor tables, 6 operating layouts, White Elephant, Raffle Layout! Information: www.piedmont-div.org or leave a message at 404-550-4816

GA, SAVANNAH: Coastal Rail Buffs 32nd Annual Model Railroad and Train Show. Savannah Christian Preparatory School, 1599 Chatham Parkway, Zip: 31408. March 6-7, 2021, Saturday 10:00am-5:00pm, Sunday 10:00am-4:00pm. Adults 2-day admission \$7.00. Students/Seniors \$5.00. Active Duty Military/under 12 FREE. Dealer tables, operating layouts in O, HO, N. See www.coastalrailbuffs.org

KS, GARDEN CITY: Boot Hill Model Railroad Club Train Show. Finney County Exhibition Building, 409 Lake Ave., Zip: 67846. March 13 & 14, 2021. Saturday 10am-6pm and Sunday 11am-4pm. Admission: \$6 adults, 7 and under free w/adult. Good for both days. Food available on site. For additional information, contact Henry Turner 620-271-4306. Email hat9@cox.net or cwhit@cox.net

NC, ASHEVILLE: Asheville Train Show. Western North Carolina Agricultural Center. February 26-27, 2021. Friday noon-7:00pm and Saturday 9:00am-5:00pm. Admission \$6.00, under 10 free. All scales, all gauges, collectibles, artifacts, operating layouts, hundreds of vendor tables. More: www.Asheville-Trainshow.com

OH, MT. HOPE: UPDATE-CANCELLED. CJ Trains Spring Train and Toy Show. Mt. Hope Event Center, 8076 St. Rt. 241, Zip 44660. Saturday, March 20, 2021, 10:00am-4:00pm. Admission: \$5.00, under 12/FREE. \$25.00/dealer table, 600+ 8' dealer tables. Contact: Jon Ulbright, PO Box 446, Wooster, OH 44691. 330-262-7488, cathijon@ssnet.com www.cjtrains.com (GPS info: 8076 St. Rt. 241, Millersburg, OH 44654)

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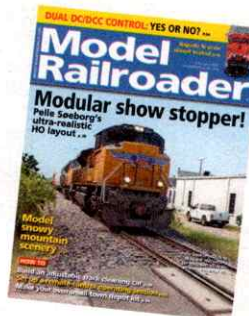
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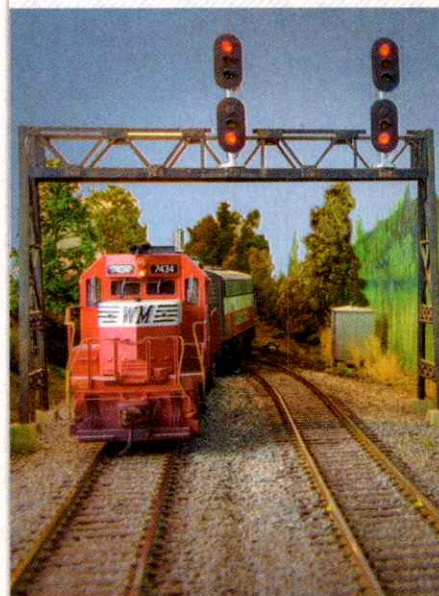
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"Are you Tony Koester?" – part 2

Some time ago (June 2017) I wrote about a chance, and very unlikely, meeting with a fellow modeler railroader on a cruise ship bound for Antarctica that began with "Are you Tony?" We had a pleasant but all too brief chat. I think his wife felt he was imposing, but we could have chatted about model railroading all afternoon – which is probably what she feared most.

Well, almost the same thing happened again, and I wasn't even there.

When Jeff Wilson and I reviewed several possible candidates for use on the cover of my book *Time-Saving Techniques for Building Model Railroads* (Kalmbach Books, 2019), one particular shot seemed to stand out. It showed one of the masters of the art of getting more done in less time, Doug Tagsold, working on the upper deck of his unique 1:72 Colorado & Southern. (Doug's railroad was also the cover story for the 2018 issue of *Model Railroad Planning*.)

It wasn't until some time later that it occurred to me someone might assume that the photo showed me working on my railroad.

Sure enough, not long after the book had been distributed, I got an email from my good friend Doug:

"I received my copy of the book several weeks ago, but I have been waiting to see what response I got from other model railroaders before I contacted you to comment

on it. Last week during our Great Lakes Getaway series of operating sessions, it was suggested by several of the guys that I wear a shirt with your name on my back. Then it was suggested that I get a shirt that said, 'I Am Not Tony K.!'"

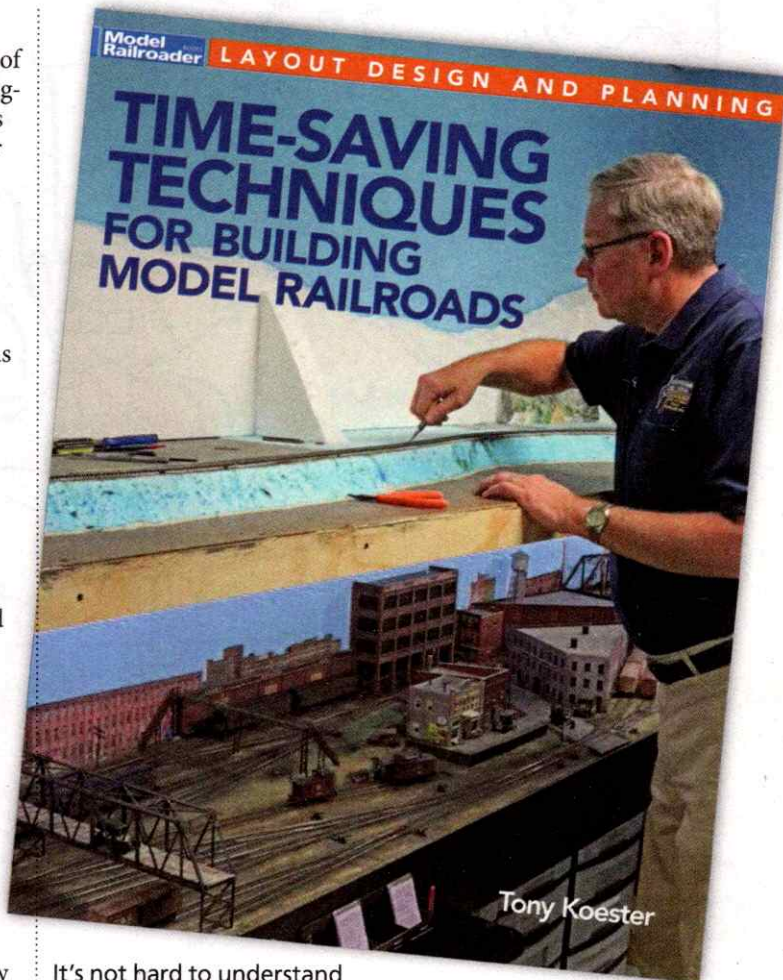
"Others jokingly commented 'Poor Tony doesn't look well,' or 'Wow, Tony has developed a gut!' All were intended, and received, as light-hearted jokes."

But the fallout from the book's cover photo didn't stop there.

"Fast forward to today," Doug reported. "I was asked to have my layout open for visitors from NMRA North Central Region Division One members of the Toledo area this afternoon. I haven't been active at the division level for many years, so I didn't know many of the people who visited today, and they didn't know me, either."

"One individual, who saw the Time-Saving book on my coffee table, came up to me later and asked if my last name was 'Koester.' It caught me totally by surprise, but he was actually serious. After a few chuckles, I explained the situation. I think he was then a bit disappointed that he didn't get to meet the author."

I do hope that someone later explained to this chap whose house he was in and what his modeling credentials were. Few model railroaders have accomplished



It's not hard to understand why some folks might assume that the fellow working diligently on the upper deck of his model railroad is book author Tony Koester, but it's actually the more diligent Doug Tagsold.

Doug Tagsold photo

more, in more scales and gauges, than Doug Tagsold. Each railroad he's built has been a masterwork, yet pushed to a remarkable degree of completion in a very short time by anyone's standards. He has proved that you can build a basement-size model railroad to high standards in a relatively short period of time, even working alone, if you adopt and stick to a regular work schedule.

My work ethic pales by comparison. I've managed to

build two basement-size HO railroads to a high degree of completion in the same basement in the 40-odd years since we built this house. But in just three decades, Doug built the basement-size two-deck HO Denver, Front Range & Western, totally rebuilt the lower deck into the Denver Belt, built the On3 Durango & Silverton in his business's basement next door, moved across town and modeled a Toledo belt line in HO, and now models the Colorado & Southern in 1:72 using HO scale track and mechanisms.

Come to think of it, I'm the guy who should be wearing a special T-shirt, one that says, "I'm Not Doug Tagsold!" **MR**



IT WASN'T UNTIL SOME TIME LATER THAT IT OCCURRED TO ME SOMEONE MIGHT ASSUME THAT THE PHOTO SHOWED ME WORKING ON MY RAILROAD. – TONY

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One unit in particular, BNSF #6976, was pulled from storage in 2002 and repainted into a special "Maersk" paint scheme to commemorate the opening of the shipping company's new container terminal in Los Angeles, where it was paired with Norfolk Southern's SD40-2 #3329.

You can get both of these engines from Kato in N scale, along with their "as built" Amtrak predecessors, thanks to a new run of SDP40F locomotives available in early 2021, available in standard, DC, and DCC + Sound variations! Order yours today!



The Amtrak Phase I SDP40F can be paired with Kato's Phase I Amfleet cars to effectively represent early era Amtrak trains when they were using all of their own new equipment!

Item #	Description	MSRP
#176-9205	N EMD SDP40F Type I Amtrak Phase I #501	\$130
#176-9206	N EMD SDP40F Type I Amtrak Phase I #508	\$130
#176-9241	N EMD SDP40F Type IVb BNSF Maersk #6976	\$125
#176-9205-DCC	N EMD SDP40F Amtrak Phase I #501 w/ DCC	\$210
#176-9206-DCC	N EMD SDP40F Amtrak Phase I #508 w/ DCC	\$210
#176-9241-DCC	N EMD SDP40F BNSF Maersk #6976 w/ DCC	\$205
#176-9205-LS	N EMD SDP40F Amtrak Phase I #501 w/ ESU Sound	\$330
#176-9206-LS	N EMD SDP40F Amtrak Phase I #508 w/ ESU Sound	\$330
#176-9241-LS	N EMD SDP40F BNSF Maersk #6976 w/ ESU Sound	\$325
#106-8011	N Amtrak Amfleet I Phase I 4-Car Bookcase Set	\$125
#106-8012	N Amtrak Amfleet I Phase I 2-Car Set A	\$55
#106-8013	N Amtrak Amfleet I Phase I 2-Car Set B	\$55
#106-6198	N Gunderson MAXI-I MAERSK #100029	\$150
#106-6199	N Gunderson MAXI-I MAERSK #100043 w/ Maersk Containers	\$150

BACHMANN

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SCALE



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REPLACEMENT PADS AVAILABLE
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